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Stem Cells and Development
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Global transcriptional profiling of neural and mesenchymal progenitors derived from human embryonic stem cells reveals alternative developmental signaling pathways

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ABSTRACT

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Stem Cells and Development

Human embryonic stem cells can be differentiated along different lineages, providing the possibility of a precise analysis of genes profiles associated with specific commitments. Subtractive gene expression profiling between differentiated and undifferentiated cells provides lists of potential actors in this commitment. This combines, however, genes that are specifically associated with development and others that are over expressed because of non-lineage-specific differentiation systems. As a way to establish gene profiles associated with the neural and/or to the mesodermal commitments of human embryonic stem cells more precisely, we have carried out a two-step analysis. We first performed a subtractive analysis of gene profiles of each of these lineages as compared to the undifferentiated stage. Then, we extended the analysis by comparing the two sets of results with each other. This strategy has allowed us to eliminate large numbers of genes that were over expressed in both sets of results and to uniquely associate different gene networks with either the neural or the mesodermal commitments.

INTRODUCTION

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For one decade, human embryonic stem cells (hES) have been recognized as a valuable model for studies of early steps of human development since the acquisition of a defined phenotype *in vitro* follows sequential activation of gene networks and epigenetic changes that closely mimic events occurring *in vivo* during embryogenesis [1-5]. Identification of culture conditions that specifically direct hES toward unique phenotypes provides new ways to analyze molecular correlates of early developmental transition phases. One of the major technical advances for the study of such transitions is the development of efficient technologies such as DNA microarray that enable monitoring gene expression at the level of mRNA on a genomic scale. Nevertheless, analysis of how genes are controlled during transition toward a dedicated developmental path is restricted mainly by the ability to obtain homogeneous populations of cells because their phenotypes are continuously changing over time. Despite this, several studies clearly demonstrate that such approaches applied to hES and their progenies can provided useful informations about gene expression involved in the developmental processes [6,7]. As an example of meta-analyze see [8] and for review on human embryonic stem cell transcriptome profile see also [9].

Over the last few years, important efforts focused on the possibility of controlling the differentiation of hES particularly for neural fate. Indeed, using protocols based on the co-culture of hES with defined stromal cell lines exhibiting neural inducing activity, it is possible to directly visualize the process of neural conversion by forming of columnar epithelial cells radially organized resembling a cross section of neural tube named “neural rosettes” [10,11]. These neurectodermic clusters of cells are greatly enriched in neural progenitor cells (NPC) which have the ability to differentiate into various subtypes of neurons, astrocytes and oligodendrocytes [10-14]. Although this system of culture is considered to be relevant for neural induction, neural cells differentiated *in vitro* from hES are widely heterogeneous,

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probably due to no synchronized processes [15]. Consequently, neural rosettes represent structures that contain a mixture of cells, including neuroepithelial progenitor cells (NEPC), neural stem cells (NSC), committed neurons at different stages of their development and probably neural crest derivatives at their periphery. For this reason, several groups have attempted to develop cell selection strategies including the use of fluorescence-activated cell sorting (FACS). To date, only few membrane markers have been used to enrich cultures in neural precursors and neurons [16]. Among these markers, we used Neural Cell Adhesion Molecule (NCAM/CD56) in this work [17].

The production of mesenchymal precursors (MPC) has not been as widely reported as that of neural precursors. By taking advantages of the recent development of protocols triggering the differentiation of hES toward a near-homogenous amplifiable population of mesenchymal progenitors exhibiting a phenotype of Mesenchymal Stem Cells-like (MSC) can be obtained [18-23]. In this study, we produced highly homogenous cell populations for both neural and mesenchymal precursors by engagement of the hES cells into either the neural or the mesodermal lineages. The analysis of gene expression patterns of these two populations, sharing the same genetic background, compared to the same starting population that were hES cells, using strictly identical procedures for hybridization and statistical analysis, allowed us to select genes that were modulated in opposite directions during commitment to either neural or mesenchymal fates. After this subtractive analysis, selected genes exhibiting modulations specific for either neural or mesenchymal precursors were used to build *in silico* global gene networks and, using a comparative strategy, to determine their implications as actors in the main signalling pathways involved in early steps of human development.

MATERIALS AND METHODS

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Human ES Cells Culture

Two hES cell lines, SA01, (XY, passage 40, Cellartis, Sweden) and VUB01 (XY, passage 80, AZ-VUB, Belgium) were maintained and propagated on a feeder layer of STO (SIM mice Thioguanine and Ouabaine resistant) murine embryonic fibroblast cells inactivated by Mitomycin C (Sigma Aldrich, 2.5 µg per mL overnight at 37°C). Cells were cultured in a humidified 5% CO2 incubator at 37°C in a serum replacement medium (Knock-out DMEM, 20 % Knock-out Serum Remplacement (KSR), 1% Glutamax 1mM, 1% Non Essential Amino Acid (NEAA), 0.1% Beta-Mercaptoethanol (BM) 0.1% and 1% Penicillin/streptomycin (P/S), all from GIBCO) supplemented with 8ng/mL of bFGF (Invitrogen). The culture media was changed daily and routine passages routinely performed by mechanical cutting of hES cells on a fresh feeder layer every 4-5 days.

Differentiation of hES cells toward NPC, neurons and astrocytes

Differentiation of hES cells toward NPC

The differentiation of hES toward neurectodermal rosettes was adapted from the Stromal Differentiation Inducing Activity protocol as described elsewhere [10]. Briefly, hES cells were manually dissociated from the STO feeder layer and plated at a density of approximately 10^3 cells per cm² on a confluent layer of mitotically inactivated murine stromal feeder cells (MS5). Cells were cultured in KSR medium (Knock-out DMEM, 15 % KSR; 1% Glutamax; 1% NEAA and 0.1% BM, all from GIBCO) for 14-16 DIV (Days *In Vitro*), when the medium was replaced by Neurobasal medium, N2 (DMEM-F12+ Glutamax, 1% N2 supplement and 1% P/S) until DIV21.

Cell sorting

Cells were harvested at DIV21 using TrypLE Express (GIBCO) and about 5.10^6 cells were suspended in PBS-2% Fetal Calf Serum containing 1% 7-amino-actinomycin D (7AAD)

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(Sigma) and then incubated with IgG1κ Direct conjugated Phyco-erythrin (PE) monoclonal anti human Neural Cell Adhesion Molecule (hNCAM) antibody diluted 1/10 provided by BD Biosciences Pharmingen™. This antibody recognizes an extracellular immunoglobulin-like domain common to three molecular weight forms –Mw 120, 140 and 180 kilodaltons –of the NCAM protein. The cell sorting was performed by a MoFlow Cell Sorter Cytometer from Cytomation and positive and negative fractions were collected in 1mL of N2 medium with 1% P/S.

Differentiation of NPC toward neurons and astrocytes

After sorting, the NCAM+ cells were seeded on Poly-Ornithine (15µg/mL,Gibco)/laminin (1mg/mL,Sigma) coated dishes ($50x10^3$ /cm2) in N2 medium supplemented with growth factors bFGF (20ng/ml, Invitrogen), and EGF (10ng/ml, Abcys) to allow their proliferation for 10- 15 days. The medium was changed every two days. When confluent, they were passaged (P1) after exposure to collagenase 1mg/ml for 15 minutes at 37°C and plated in N2 medium supplemented for differentiation toward either neurons or astrocytes. For neuronal differentiation, BDNF (10 ng/mL) and AA ascorbic acid (10 ng/mL) was added in the N2 medium which was changed every 2-3 days for 2 weeks after which the cells were fixed. For differentiation toward astrocytes, medium was supplemented with EGF and CNTF (20ng/ml, R&D) for 15 days. After that, they were passaged and maintained in N2 medium containing only CNTF until around 100 DIV and then fixed for immunochemistry.

Differentiation of hES cells toward MPC cells, osteoblasts and adipocytes

Differentiation of hES cells toward MPC cells

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Mesodermal differentiation was obtained as previously described by our laboratory [22] using a modified protocol from Barberi *et al* [23]. Briefly, differentiation was induced by plating $2*10^4$ ES cells/cm^2 on 0.1% gelatin coated dishes in the presence of KO-DMEM medium supplemented with 20% Fetal Bovine Serum (FBS, Invitrogen), 1mM L-glutamine, 1%NEAA, 1% P/S and 0.1mM BM. Medium was changed every 3 days. Confluent cells were passed with trypsin/EDTA 1X (Invitrogen) in new gelatine coated dishes. Immunophenotyping was carried out using a FACScalibur and the Cell Quest software (Becton&Dickinson Biosciences). More than 10,000 events were acquired for each sample and analysed. Cells were harvested as previously described and incubated for 30 minutes at room temperature with one of the following anti-human antibodies: CD73-PE (SH3/NT5E), CD44-PE, CD54-PE (I-CAM-1), CD29-PE (integrin β1), CD106-PE (VCAM), CD166-PE (ALCAM), CD14-PE, CD31-PE (PECAM-1), CD56-PE (NCAM), HLA-ABC-PE, HLA-DR-PE, CD34-APC, CD45-FITC (all from Becton&Dickinson Biosciences/Pharmingen); CD105-PE (SH2/Endoglin; Caltag); Nestin-PE (R&D systems) and primary monoclonal antibody vimentin and Stro1 were used with mouse IgG- or IgM-Alexa as secondary antibody. Mouse isotype antibodies served as respective controls (Becton&Dickinson). The acquisition was performed by the FACScalibur cytometer and data were analyzed with Cell Quest Pro Software (Beckton-Dikinson).

Differentiation of MPC cells toward osteoblasts and adipocytes

To induce osteoblastic differentiation, cells were plated at a density of 30 000 cells/cm² in a specific medium (Cambrex), containing dexamethasone, ascorbate and B-glycerophosphate (Sigma-Aldrich). After 21 days, cell phenotype was analysed by alkaline phosphatase activity (Sigma-Aldrich). Adipogenic differentiation was induced by culturing the cells in the specific medium (Cambrex) supplemented with 100µM linoleic acid. Adipogenesis was detected by the presence of neutral lipids in the cytoplasm stained with Oil Red Oil.

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Immunocytochemistry

Cells were fixed in paraformaldehyde for 20 minutes at room temperature, rinsed with PBS and blocked with 1% BSA, 5% goat serum 0,1% triton in PBS solution for 1 hour and thereafter were incubated with the appropriate primary antibodies overnight at 4°C. Rabbit polyclonal antibodies included Nestin (dilution 1/500: Chemicon) and GFAP (dilution 1/1000; DAKO). Mouse Monoclonal antibodies (IgG) included TujI (dilution 1/500, Covance), Stro-1 (dilution 1:100) and SMA (alpha smooth muscle: 1:100, DAKO). Appropriate Alexa 488 and Alexa 555 labeled secondary antibodies were used at 1/500 and 4',6-diamino-2-phenylindole at 2µg/ml (Sigma) for counterstaining.

The preparations were analyzed by epifluorescence microscopy (Zeiss Imager Z1 and Zeiss Axiovert 40CFL) and images were captured with Axiocam mRM (Zeiss).

RNA Sample preparation

mRNA samples were extracted using the RNeasy Mini kit (Qiagen) according to the manufacturing protocols for undifferentiated hES cells, NPC and MPC. RNA samples were quantified using the Nanodrop photometer and quality controls were performed on BioAnalyzer 2100 (Agilent). For RT-PCR analysis, cDNAs were prepared by reverse transcription of 500 ng of mRNA using the SuperScript II Reverse Transcriptase kit according to the manufacturer's instructions (Invitrogen). Primers used in this study are shown in Supplementary Table S1. Quantitative RT-PCR analyses were performed with Chromo4 Analyser (Biorad) and calculations were performed using the delta-delta C(t) method.

Hybridization and data analysis

RNA samples were labeled and hybridized on the GeneChip Human Genome HG_U133_Plus 2.0 Array (Affymetrix) by the RNG platform (Réseau National des Génopoles, Paris, France)

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according to the Affymetrix procedures. Hybridization data were exploited using Array Assist 4.2 software (Stratagene). First, the software validated the quality controls. Next, the GC-RMA statistical algorithm procedure was used to normalize hybridization intensity values. A one way-ANOVA test was applied on transformed logarithm base 2 data to retain values that did not changed significantly ($\alpha<0.05$) among triplicate samples. Identification of modulated genes was performed using the Student parametric statistical test adjusted with the FDR Benjamini-Hodgberg correction. A gene was considered as modulated for a Fold Change (FC) >2 with a corrected p-value, $\alpha_c<0.05$. The final list of modulated genes was established by removing duplicate data (multiple probesets measuring the same gene) to retain the most modulated one. GO biological processes and canonical pathways analysis enriched in differentially expressed genes were identified using the Fischer exact test as implemented in the Ingenuity Pathways Analysis (Ingenuity® Systems, www.ingenuity.com) software.

RESULTS

Obtention of two homogenous neural and mesodermal progenitor cells from hES

Two hES cell lines (SA_01 and VUB_01) were induced in triplicate toward the neural lineage using the SDIA protocol (see Material and Methods). Under these conditions, neural rosettes appeared around 16-18 days *in vitro* (DIV) (Supplementary Figure S1A). To get a homogenous population, cell sorting was performed at DIV21 using the membrane marker Neural Cell Adhesion molecule (NCAM/CD56) known to be expressed in neural precursors but not expressed in MS5 mouse feeder cells and to a small extent in the undifferentiated hES cells (Supplementary Figure S1B). The NCAM positive cells, termed NPC, expressed a combination of markers known to be specific for the neurectodermic precursors such as NESTIN and the transcription factors *SOX1*, *PAX6* and *OTX2*. Moreover, the NCAM positive cells exhibited a complete loss of *NANOG* expression and did not express *GFAP* (Glial

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Fibrillary Acidic Protein) by RT-PCR (Supplementary Figure S1C) or by immunochemistry (Supplementary Figure S1 D-F). The NCAM positive cell population was able to give rise to cells positive for TUJ1 (βIII-tubulin) and for GFAP corresponding to neurons and astrocytes respectively (Supplementary Figure S1 G-H). Differentiation of ES cells into mesenchymal precursors (MPC) displaying a phenotype similar to that described by previous authors [18-21] was readily obtained after about 30 days of culture (two to three passages). Cells displayed a homogeneous fibroblast-like morphology (Supplementary Figure S2A). At near homogeneity, they expressed CD29 (β1-integrin), CD44 (H-CAM), CD73 (SH-3, ecto-5'-nucleotidase), CD105 (SH-2, endoglin), CD166 (ALCAM), and were negative for hematopoietic markers (CD34, CD45 and CD14), neuronal markers (NCAM/CD56 and FORSE1), and the endothelial marker CD31 (Supplementary S2B). Cells were immunoreactive for Stro1 and some of them are positive for α-SMA (alpha smooth muscle actin) (Supplementary Figure S2C). In addition, these MPC cells were also able to differentiate into osteogenic or adipogeneic cells in appropriate conditions (Supplementary Figure S2D).

Global analysis of gene expression

To compare the expression patterns during the commitment of hES toward the neural and the mesenchymal fates, transcriptome analysis was performed in triplicate on the two undifferentiated hES cell lines SA01 and VUB01 and the two progenitor cell populations, NPC and MPC (Figure 1A). The global expression profiles of these three populations were compared by correlation plot and by the Principal Component Analysis (PCA). A high correlation coefficient was observed between the expression patterns of the three replicates for each cell line and between the two cell lines indicating a small variability between the biological samples for the same stage of differentiation (Figure 1B). Moreover, when the three

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distinct populations were plotted by PCA, samples for the same stage were very close (Figure 1C). This allowed us to group the results obtained for the two cell lines for further statistical analysis. A total of 3167 genes were found to be differentially expressed between NPC and hES cells, 1727 up-regulated and 1440 down-regulated (Supplementary Tables S2 and S3), including genes with no annotation, putative genes and expressed sequence tags (EST) that amounted to about a quarter of all modulated genes. Parallel comparison between hES and MPC, revealed 5931 genes modulated including 2212 genes up-regulated and 3719 genes down-regulated in MPC (Supplementary Tables S4 and S5). As expected, major markers of pluripotent hES cells including *NANOG; OCT4 [POU5F1]; REX1 [ZFP42]; FGF4; FOXD3; CLDN6; GDF3; DNMT3A* and *CD2* were down regulated in both NPC and MPC. However, the expression of the pluripotency transcription factor *SOX2*, was maintained in neural progenitors whereas it was switched off in mesenchymal progenitors.

As quality control of genes modulated in the transcriptomic experiment, we found specific neural genes expected to be up-regulated in NPC cells compared to hES, such as *NCAM, PAX6*, *SOX1* and *OTX2*. On the contrary, neither markers of mesoderm such as T/Brachyury, *HAND1, IGF2, CD45, FLK1, CD31, MYOD, CALP* [*Calponin*] nor endodermal markers *SOX17, FOXA2, GATA4, AFP* were found modulated. In the same way, concerning genes known to be implicated in the MSC phenotype, *CD73/NT5E, CD105/ENDOGLIN, CD44, INTEGRIN β1/ITGB1, ALCAM/CD166* and *VIMENTIN*, were all found to be up-regulated in MPC compared to hES.

Subtractive gene expression profiling

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The lists of the modulated genes in the NPC and the MPC cell populations were compared (Figure 1D). The 785 genes which are up regulated in NPC but not in MPC (Supplementary Table S6) and the subset of 306 genes which were up regulated in NPC and down-regulated in MPC were selected as potential candidate genes involved in the neuralizing process (Supplementary Table S7). Conversely, the 1479 genes which are up-regulated in MPC but not in NPC (Supplementary Table S8) and the subset of 94 genes which were up-regulated in MPC and down-regulated in NPC were selected as potential candidate genes involved in the mesenchymal differentiation (Supplementary Table S9). Between the two selections of genes specifically implicated in the neuralization process or in the mesenchymal differentiation, we focused on transcription regulators which were specifically up-regulated in each of both processes (Table S10). For the neuralization process, among the 127 up-regulated transcription regulators (Table S10, left panel), for the eleven most modulated genes with a FC> 10, eight were annotated in nervous system development (GO and IPA classifications) including genes such as *LHX2, PAX6*, *ZIC1*, *FOXG1B, TFAP2B, ZBTB16* and *EMX2* all implicated in the neural progenitor signature. Besides these genes, others were annotated to be involved in neural and other developmental processes, such *DACH1* and *LEF1* or several members of family transcription factor such as the Inhibitor of DNA binding (*ID2* and *ID4*), the POU domain family members (*POU3F2* and *POU4F1*) but also the homeobox family members HOX (*HOXA1* and *HOXA9*). In addition, genes found to be up-regulated in NPC and strongly down-regulated in MPC included SRY-related box protein members such as *SOX3* and *SOX11* or the member of the bicoïd sub-family of homeodomain-containing transcription factors such as *OTX2* which encodes gene already reported to be involved in neurogenesis.

For the mesenchymal differentiation of the 118 up-regulated transcription regulators (Table S10, right panel), 25 were implicated in connective tissue development (IPA classification).

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The most modulated genes were *SIX1* which encodes of the homeobox gene superfamily and two genes related to TGF-beta signaling were highly up-regulated, *CDKN2B* and *TGF1B1I1*. Other modulated genes involved in development included several members of the Forkhead-box family (*FOXD1, FOXF1, FOXF2, FOXJ2, FOXL1* and *FOXP1*), the basic helix-loop-helix family (*BHLHE40* and *BHLHE4)***,** the Krüppel-like factors (*KLF2, KLF7* and *KLF9)***,** signal transducers and activators of transcription (*STAT1, STAT2, STAT3* and *STAT6)***,** T-box members *(TBX2* and *TBX3)* and homeobox family members (*HOXB2* and *HOXB7).*

Transcriptional networks using an *in silico* approach

Global gene networks were built based on selected genes exhibiting specific overexpression in each precursor, as described above, for either the neural (Figure 2A) or the mesenchymal differentiation (Figure 2B). Starting from the core pluripotency gene network composed of the three transcription factors, *NANOG*, *OCT4* and *SOX2*, their potential targets were explored by selecting genes that were specifically up-regulated in each precursor cell population.

For the neural gene network, the starting point was the binding relationship linking *PAX6* and *LHX2* promoters with NANOG, OCT4 and SOX2 proteins encoded by the core pluripotency genes. Using this strategy, the construction of the gene network step by step revealed some nodes that included key transcription factors including downstream *NOTCH1* targets such as *HES1 HES5*, *LEF1* but also *PAX3* that may support a pivotal role with its complex partner *SOX10*. Otherwise, *NOTCH1* downstream signal was also connected with the SWI/SNF DNA remodelling complex (*SMARCC4* and *SMARCE1*).

For the mesenchymal gene network, *WWTR1* (also termed TAZ) implicated downstream of *TGFB1*, acted on the level of expression of *NANOG* and *POU5F1* and thus may control several developmental genes including *GATA6*. Moreover, *SOX2* (whose expression was maintained in neural but greatly decreased in mesenchymal differentiation) was connected with two critical genes involved in osteogenic differentiation, *JUN* and *TWIST1*. Organisation

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of the network also included *PPARG* which is involved in differentiation of mesenchymal stem cells toward adipocytes and *STAT3* which acts downstream of the FGF signalling pathway and is involved in differentiation process.

Alternative signaling pathways controlling cell fate decisions

Levels of gene expression were explored in three signaling pathways, Notch, Wnt, and TGFβ/Activin/BMP that are known to be involved in hES cell fates determination but required different partners depending of lineage-specific differentiation.

Notch signaling pathway

Some genes encoding for ligands of Notch, such as *JAG1* and *DLL1* were found to be up-regulated in the NPC but not in the MPC cells (Figure 3A and 3B). Regarding the receptors in this pathway, *NOTCH1* was specifically up-regulated in the NPC cells, *NOTCH2* was found up-regulated in both progenitor cell types whereas other family members of NOTCH receptors were not modulated. Genes implicated in the modulation of the activity of NOTCH signaling that were specifically up-regulated in NPC cells included : *LFNG* (encoded a fucose-specific glycosyltransferase), *ADAM17* (encoded a metallopeptidase involved in the proteolytic release of Notch intracellular domain from the Notch1 receptor) and *PSEN1* (presenilins-1) involved in the cleavage of the Notch receptor and the regulation of gamma secretase activity. On the contrary, *NUMB* encoding for an inhibitor of the Notch pathway and playing a role in the determination of cell fates during development was specifically over expressed in MPC. At least, specific transcriptional factors HES1 and HES5, downtream targets of Notch signaling were found specifically up-regulated in NPC cells but not in MPC whereas others family members were not modulated in either progenitor cell types. On the contrary, *NUMB,* encoding for an inhibitor of the Notch pathway and playing a role in the determination of cell fates during development. Additionally, others downstream

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transcriptional factors of the Hairy/enhancer-of split related with YRPW motif family exhibited similar expression profiles in the two progenitor cell types (ie up-regulation of HEY1 and down regulation of HEY2). Specific over expression of *DLL1, NOTCH1*, *HES1* and *HES5* were confirmed in NPC by quantitative RT-PCR (Figure 3C).

Wnt Signaling pathway

Concerning genes involved in the Wnt signaling pathway, over expression of genes encoding negative regulators of this canonical pathway was observed in the NPC whereas genes modulated in MPC cells rather reflected its activation (Figure 4A and 4B). Indeed, Wnt inhibitors including secreted antagonists such as *DKK1, SFRP2* and *FRZB* were all over expressed specifically in NPC. In addition, genes encoding for Wnt ligands such as *WNT2B*, reported to be a repressor of the canonical pathway, appeared to be specifically up-regulated in NPC cells whereas *WNT5A* and *WNT5B*, two non canonical ligands, were found to be modulated in the two types of progenitors. For the Wnt Receptors, notably Frizzled proteins, *FZD3* and *FZD5* were found respectively up or not regulated in neural progenitors whereas they were both switched off in mesenchymal progenitors. Concerning transcriptional regulators involved downstream of Wnt signalling pathways, genes involved in the repression of the β-catenin complex were found to be up-regulated only in NPC such as the SOX transcription factor *SOX3* but also *CTNNBIP1*, a gene encoding a small soluble inhibitory protein also termed *ICAT* (Inhibitory of beta-catenin and TCF) which prevents the interaction of β-catenin with different binding partners including *LEF1*. In addition, the gene encoding for the transcription repressor *TLE4*, a member of the Groucho family, was also found up-regulated only in the NPC cells. Finally, when looking for the expression of genes known to be controlled directly downstream of the canonical β-catenin pathways, some genes, such as *DCT*, *POU3F2* and *NRCAM***,** controlled downstream of the complex containing *LEF1*

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Stem Cells and Development

appeared to be induced in NPC cells whereas no modulation of these genes was observed in the MPC cells. On the contrary, genes encoding important Wnt-induced mesenchymal markers such as FOSL1, JUN, PPARδ, CD44 were all up-regulated in the MPC whereas the expression of these genes was not modulated in the NPC. To confirm these results, expression modulations for several genes, *WNT2B*, *FRZB*, *SFRP2*, *LEF1*, involved in Wnt signaling pathway were confirmed by Quantitative PCR using new biological samples in triplicate from three independent differentiation experiment. Results showed that they were found to be up regulated in NPC and not modulated or down-regulated in MPC compared to hES (Figure 4C).

TGFβ/Activin/BMP signalling pathway

Among the genes involved in BMP/TGFβ signaling pathways (Figure 5A and 5B), *BMP7* expression was up regulated during the differentiation of hESC toward NPC, whereas it was switched off during their differentiation toward MPC. Interestingly, we also found up-regulation of FST gene in MPC encoding follistatin, an inhibitor of BMP pathway (Figure 5C). In contrast, the up regulation of *INHBA* (inhibin beta A, also termed activin A), which encoded a strong inducer of mesendoderm was overexpressed only in MPC (Figure 5D). Differences between others modulated genes encoding for TGF*β* ligands were also found such as up- regulation of *TGFB1* specifically in MPC. Concerning downstream transcriptional factors target, we found an up-regulation of *SMAD3* in both NPC and MPC cells respectively whereas *SMAD5* was found slightly modulated only in NPC.

At last, in order to confirm expression modulation of genes specifically involved in one of these signaling pathways either in neural or mesenchymal progenitors, quantitative PCR data were carried out from new independent biological samples (Figure S3).

DISCUSSION

Global transcriptional profiling of neural and mesenchymal progenitors derived from human embryonic stem cells reveals alternative developmental signaling pathways (doi: 10.1089/scd.2010.0331)
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The principal result of this study is the comparison of gene expression profiles in two homogenous populations of neural and mesenchymal of progenitors by subtractive gene expression profiling during early differentiation in hES toward either neural or mesodermal commitment. Genes whose expressions were regulated in opposite directions might be of particular interest in molecular processes involved in the alternative cell fate decisions. Using a comparative strategy, we identified actors specific for each lineage which play an alternative role at the level of epigenetic modifications, implication of morphogens and through major developmental signalling pathways.

The integration of all these data allowed the construction of a global comprehensive developmental path between neurectoderm and mesoderm (Figure 6).

Specific gene expression pattern associated with each precursor cell

Transcriptional factors found to be specifically highly up-regulated in NPC included *LHX2, PAX6, SIX3, SIX6, SOX1* and *FOXG1B*. This gene signature indicated that our neural progenitors exhibited a pattern closed to early neural progenitors appearing first in neural plate and/or neural tube in mouse and human during normal development *in vivo*. Unlike late neural progenitors, these cells expressed markers representative of the anterior region of the mouse developing brain including *FOXG1*, *EMX2* or *OTX2* and markers of dorsal region such as *PAX3* or *PAX6*. This “anterior” pattern was associated to a broad capacity of differentiation into various types of neurons and to glial cells in response to appropriate developmental clues. Thus, the present study presented for the first time a picture of gene expression network specifically associated to the neural developmental pathway of these progenitors.

Mesenchymal progenitors derived from hES cells appeared to be the first type of progenitors exhibiting a mesodermal phenotype that can be obtained almost homogeneously [18].

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Identification in this study of genes specifically up-regulated in MPC highlighted potential factors that may play a role in the mesoderm formation including *TWIST1*. This gene is expressed in presumptive mesoderm and in invaginating cells in the ventral region of fruit fly embryos and functions in a signaling cascade to initiate mesodermal development during gastrulation in multicellular organisms ranging from Drosophila to vertebrates [24-26]. *TWIST* plays a central role in dorsoventral patterning, which is essential for multiple steps of mesoderm development in Drosophila [27,28]. Another interesting gene includes *WWTR1/TAZ* which was known to control the mechanism of self-renewal through controlling Smads nucleo-cytoplasmic shuttling [29-31] and thus may contributing to the cell fate choice by controlling mesodermal genes. Among other genes that may represent important developmental nodes, *RUNX2, SQSTM1* that are both involved in skeletal development were highlighted suggesting that early mesodermal progenitors acquire a developmental context that enhances osteogenesis.

Epigenetic modification signatures

The transcriptional signature also deciphers the role of another type of developmental regulation that concerns genes involved in epigenetic modifications.

Among genes that are differentially expressed during neural or mesoderm differentiation, genes encoding helicases that function to open chromatin to enhance transcription in the SWI/SNF DNA chromatin remodeling complex family including *SMARCC1* and *SMARCE1,* were found specifically up-regulated in the neural progenitors and may interact with proteins encoded by other specific genes such as *ARID2* and *ARID1B* [32,33]. These proteins may play a role in enhancing differentiation by coupling gene repression with global and local changes in chromatin structure [34]. In mesenchymal precursors, specific up-regulation of *SMARCA2*

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was observed, that has been described to be specific of mesoderm in early post-implantation mouse embryos [35].

Morphogen implications

Another aspect of the transcriptional signatures concerns morphogens that act through signalling pathways. *BMP7* was found to be up-regulated in neural progenitors and therefore these cells may themselves produce morphogens that contribute to control downstream genes involved in neural development including *ZIC1* [36] and *GLI3* [37]. In MPC, the up-regulation of *INHBA* encoding the beta A subunit that forms a homodimer named Activin-A was reported to be one of the most important mesodermal morphogens in classical developmental models including *Xenopus laevi* [38]. More recently, Willems and Leyns described that Activin A supported self-renewal of hES and directed the nascent mesoderm toward axial mesoderm and mesendoderm [39]. This increase also coincides with up-regulation of the activin receptor type 1, *ACVR1*. Inversely, inhibition of Activin/Nodal signalling promotes specification of hES into neurectoderm [40]. In this context, it is interesting to notify that the *follistatin*, encoding a protein that antagonizes activin [41,42] and BMP signalling pathway in Xenopus embryo [43] is specifically up-regulated in NPC. This might suggest that follistatin may contribute to induce neural differentiation of hES *in vitro* by antagonising the different pathways (BMPs, Activin and TGFβ). Indeed, currently, the most efficient protocol allowing hES differentiation toward neurectoderm uses Noggin (an inhibitor of BMPs) and SB43542 (an artificial molecule inhibating Activin and TGFβ pathways) [44,45]

Altogether, these data suggest that once the mesenchymal phenotype has been acquired, these precursors may maintain a mesodermal identity by producing themselves important

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morphogens such as Activin A and inversely the neurectodermal phenotype may be maintained by producing follistatin that prevents activation of activin pathways.

Alternative pathway responses

Wnt and Notch pathway responses occurred during both neural and mesenchymal differentiation. Although discussed, different studies described a "negative" effect of WNT/β catenin signalling pathways onto the neural induction process *in vivo* [46] and *in vitro* in mouse ES [47,48]. Indeed, an up-regulation of expression of some modulators/inhibitors of the Wnt signalling was observed in NPC (but not in MPC) including *SFRP2,* identified elsewhere to enhance neural differentiation [47] but also *FRZB*, another Wnt inhibitor found expressed in neural plate and neural tube in overlapping areas like SFRP2 during chick development [49]. During and just after gastrulation, the Wnt pathway was also involved as an inducer of primary mesenchymal cells but specific genes involved in this process are still unknown or elusive due to differences between species. In this study, we found that gene expression modulations of Wnt pathway members in mesenchymal cells but not in neural cells including *DKK3* which is both temporally and spatially regulated [50] may play a role in mesoderm formation in humans has been demonstrated in *Xenopus laevis* [51]. Additionally, a distinct profile of genes downstream of the Wnt signalling pathway was also observed. Neural progenitors did not express numerous genes known to be controlled by *CTNNB1* whereas they were expressed in MPC. In contrast, a possible mechanism would be due to the expression of the inhibitor of the interaction of βcatenin with *LEF1*. Thus, *LEF1* may interact with other proteins and control a neural gene network downstream. Concerning the Notch signaling pathway, the central role of NOTCH1 specific pathway already described was confirmed as an important path for the maintenance of the neural progenitor state [52,53] whereas the down-regulation of NOTCH1 was already reported to enhance the differentiation of mesodermal cardiogenic progeny [32]. Here, *DLL1,* one of the NOTCH1 ligands was

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found highly up-regulated in NPC and may contribute to induce *HES1* and *HES5* transcription factors acting by their dominant effect on neurogenic transcription factors and therefore to delay the differentiation of neural precursors in mature neurons maintaining a "neural precursor state". Conversely, *DLL1* was down-regulated in MPC suggesting a process that closely controls this gene during the transition toward either neural or mesoderm identity.

Some genes connected to Notch signalling were also described that may support central interactions in the global neural gene network. For example, *SOX10* that interacts with *PAX3* may reflect some features of neural crest development as demonstrated in cells surrounding neural rosettes in culture [54] and in the neural crest origin of the Waardenburg syndrome in humans [55]. WNT inhibition pathways associated with NOTCH1 activation may be involved in expression of *LEF1* specific expression contributing to an explanation of the specific regulation of downstream neural genes such as *NRCAM*, *DCT* and *POU3F2*. Concerning the acquisition of the mesenchymal phenotype, our data suggested that the differentiation involved a developmental process mimicking the TGFβ-induced epithelial-mesenchymal transition (EMT) process. Numerous genes involved downstream of TGFbeta1 signalling pathways which have already been described as major contributors of the EMT type 1 process were found to be up-regulated [56,57]. During embryonic development, the EMT is a crucial cellular process whereby adherent cells dissolve their intercellular contacts, organize their motility apparatus, and move to new locations. As observed *in vivo* during the EMT, during mesenchymal differentiation of hES, we found the loss of epithelial cell adhesion markers including E-box genes including E-cadherin [CDH1] but also claudin [CLDN3/6/10/23], occludin [OCLN] and loss of some polarity genes such as Discs Large (DLG3/7) [58]. Crumbs homolog3 (Crb3) [59] and conversely the acquisition of mesenchymal markers including Fibronectin [FN1], Vimentin [VIM] and thrombospondin-1 [THBS1]. It can be postulated that TGFβ1 signalling may reflect in part the biology of the mesenchymal

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progenitors. Moreover, *SIX1* a developmental gene encoding for a homeodomain transcription factor was the most up-regulated transcription regulator in MPC. It is known to cooperate with TGFβ and to increase the downstream EMT-induced TGFβ signal leading to the acquisition and/or maintenance of the stem cell-like phenotype accompanying EMT [60,61].

In conclusion, based on the production of precursor cell populations at near homogeneity, our data describing modulation of gene expression should contribute to a better comprehension of gene regulations involved in fate choices during differentiation of embryonic stem cells.

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AUTHORS INFORMATIONS

The gene expression data have been deposited in GEO Data Bank with the accession number **GSE8590**.

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Stem Cells and Development

LEGENDS

Figure 1 : Global gene expression patterns analysis for the hES cells (ES) and the two precursor cells, NPC and MPC derived from the same hES cells. (A) Schematic representation of the experimental procedure. (B) Correlation plots between all arrays of the experiment hybridized with ES, NPC and MPC mRNAs (n=6 per condition). Correlation was normalised in a scale from r^2=0.79 (green) to r^2=1 (red). (C) Principal component analysis (PCA) of the three cell populations representative of intra-samples variability across whole chip for each developemental stage. Each array is represented as a colored square in a two-dimensional reference. ES are represented as red squares; MPC as green squares and NPC as blue squares. (D) Genes were selected as differentially expressed either between NPC vs hES or MPC compared to hES for a thereshold of FC (Fold change) >2 and a corrected p-value $\alpha<0.05$. The lists of modulated genes in all the conditions were crossed by Venn diagrams.

Figure 2: **Global gene networks.** Networks were constructed using the Ingenuity software based on expression relationships described in the literature. Modulated genes are represented as a box with its gene symbol inside. (A) Global neural gene network and (B) global mesenchymal gene network. Genes in red were up-regulated and genes in green were down-regulated in NPC or MPC compared to hES. Colour intensities of genes were correlated to fold change intensities.

Figure 3: Comparison of gene expression modulations within Notch signalling pathway either in NPC or in MPC. Modulated genes are represented as a box with its gene symbol inside. Genes up-regulated by comparison with hES are in red and those down-regulated in green. Colour intensities of genes were correlated to fold change intensities. The following

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Stem Cells and Development

symbol ( ) indicated a relation of "inhibition" and ( ) a relation of "activation" between genes in the path. (A) Genes modulated between NPC and hES (B) Genes modulated between MPC and hES. (C) Differential gene expression measured by quantitative RT-PCR in hES (ES), MPC, NPC. Results are presented as relative expression level compared to hES cells considered arbitrarily as 1 from 3 independent samples. (t-student, * p<0,05).

Figure 4 : Comparison of gene expression modulations within canonical Wnt/β catenin pathway either in NPC or in MPC. Same legend as described in Figure 3. (A) Genes specifically modulated between NPC and hES (B) Genes modulated between MPC and hES. (C) Differential gene expression measured by quantitative RT-PCR in hES (ES), MPC, NPC. Results are presented as relative expression level compared to hES cells considered arbitrarily as 1 from 3 independent samples. (t-student, *p<0,05; **p<0,01;***p<0,001; ns statistically not significant).

Figure 5: Comparison of gene expression modulations within TGF Beta/Activin/BMP signalling pathway either in NPC or in MPC. Same legend as described in Figure 3. (A) Genes specifically modulated between NPC and hES (B) Genes modulated between MPC and hES. Differential expression measured by quantitative RT-PCR for (C) Inhibin BetaA, *INHBA* (Activin A) and (D) *FST*, Follistatin. (t-student, * p<0,05; ns statistically not significant).

Figure 6 : Comprehensive developmental path model based on our gene expression data which may be controlled the hES cell fate decision toward either neural or mesodermal fates.

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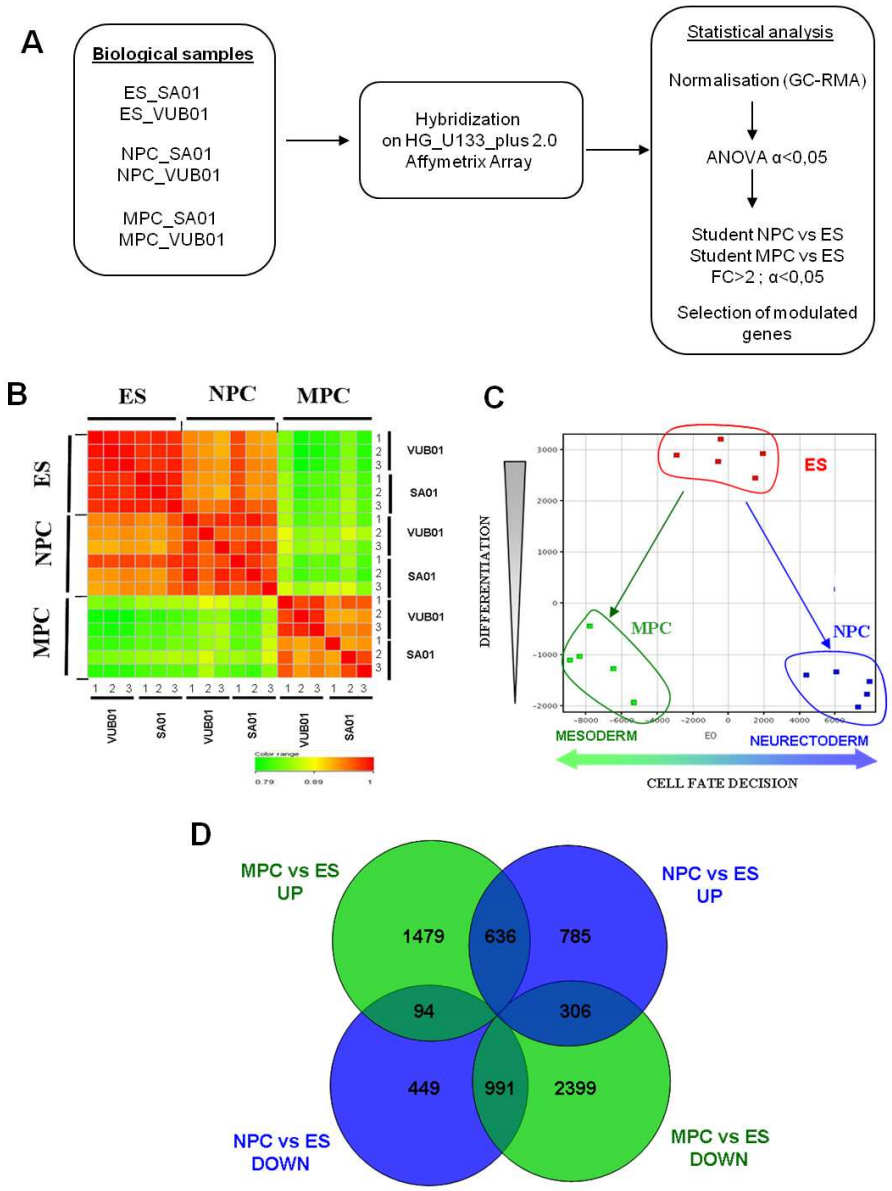

Figure 1: Global gene expression patterns analysis for the hES cells (ES) and the two precursor cells, NPC and MPC derived from the same hES cells. Schematic representation of the experimental procedure (A). Correlation plots between all arrays of the experiment hybridized with ES, NPC and MPC mRNAs (n=6 per condition). (B) Correlation was normalised in a scale from $r^2=0.79$ (green) to $r^2=1$ (red). Principal component analysis of the three cell populations (C). Comparison of the expression profiles (D). Genes were selected as differentially expressed either between NPC vs hES or MPC vs hES for a thereshold of FC (Fold change) >2 and a corrected p-value $\alpha<0.05$. The lists of modulated genes in all the conditions were crossed by Venn diagrams.
183x239mm (150 x 150 DPI)

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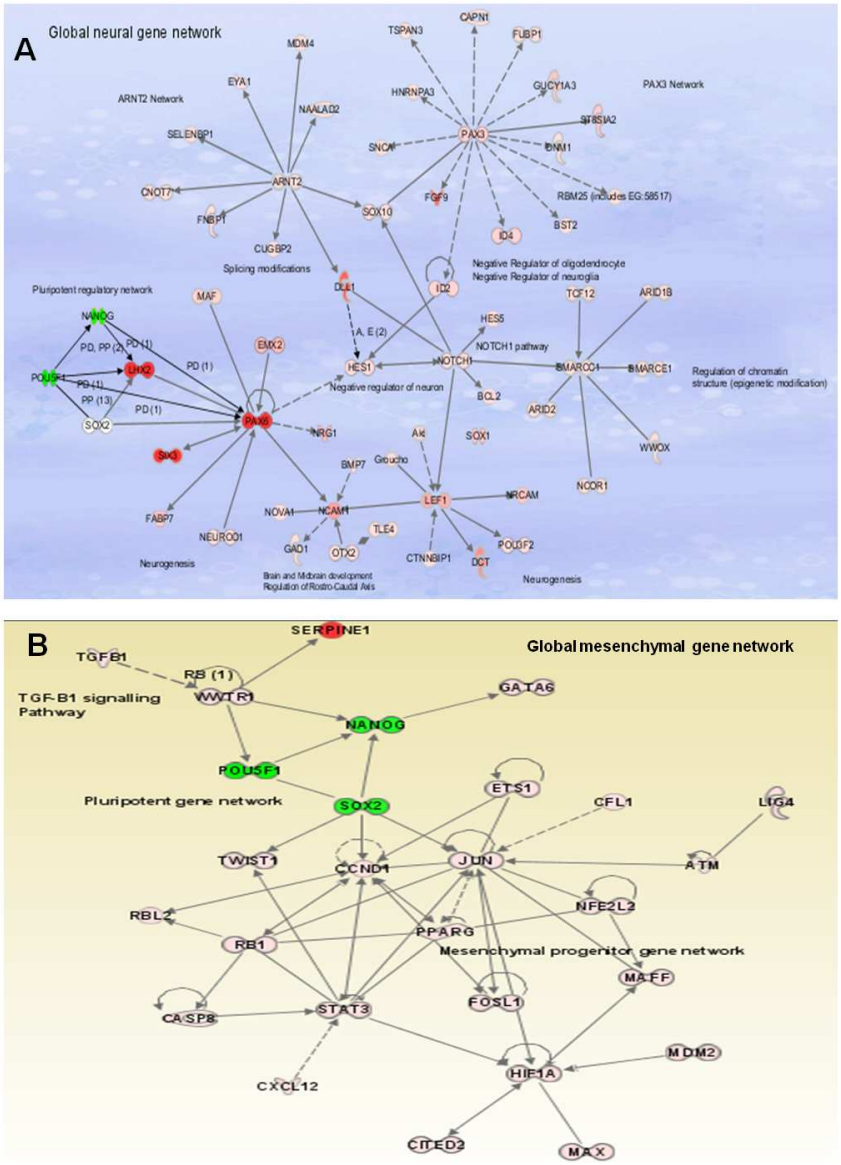

Figure 2 : Global gene networks. Networks were constructed using the Ingenuity software based on expression relationships described in the literature. Modulated genes are represented as a box with its gene symbol inside. Global neural gene network (A) and global mesenchymal gene network (B). Genes in red were up-regulated and genes in green were down-regulated in NPC or MPC compared to hES. Colour intensities of genes were correlated to fold change intensities.
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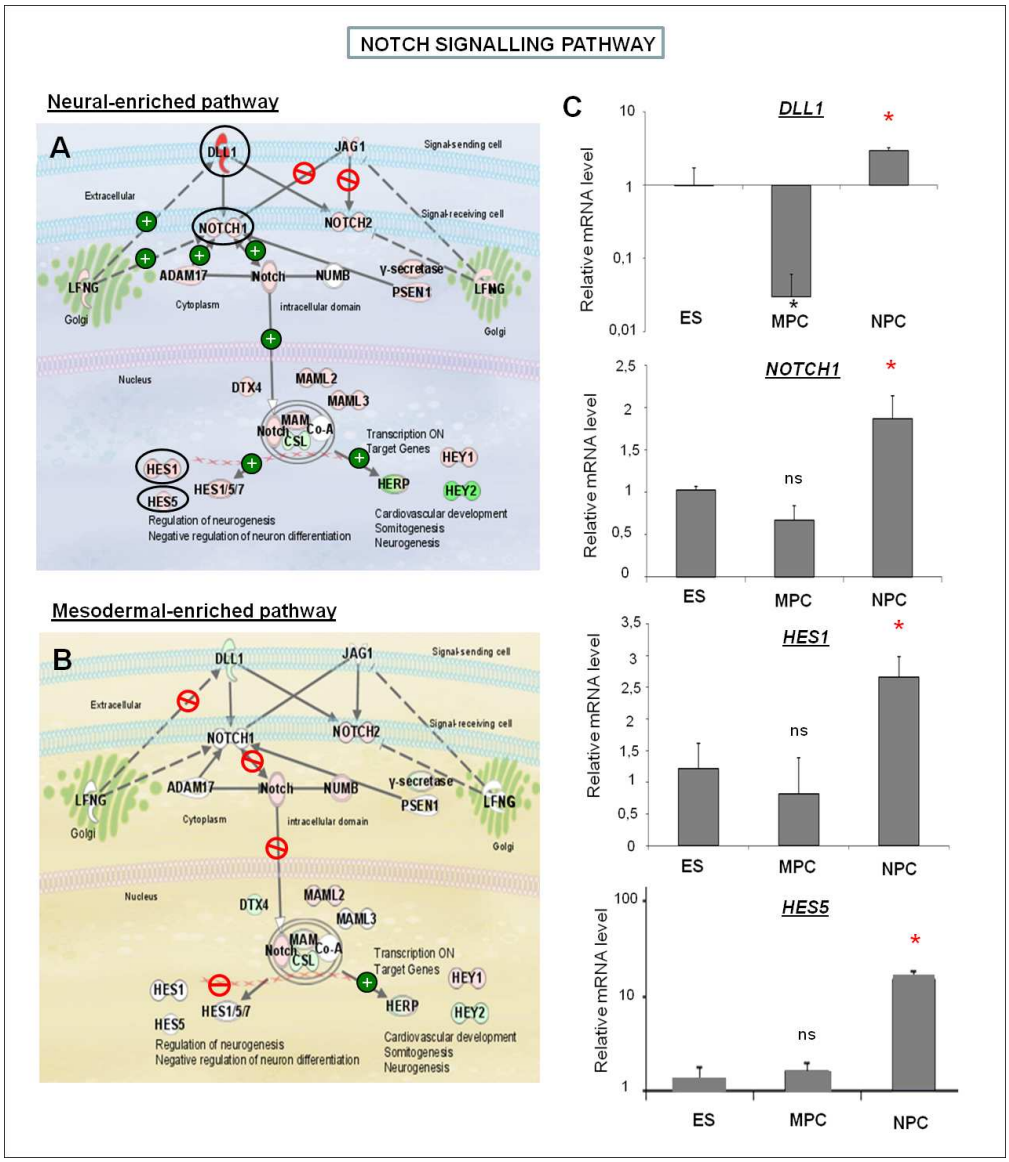

Figure 3: Comparison of gene expression modulations within Notch signalling pathway either in NPC or in MPC. Modulated genes are represented as a box with its gene symbol inside. Genes up-regulated by comparison with hES are in red and those down-regulated in green. Colour intensities of genes were correlated to fold change intensities. The following symbol ( ) indicated a relation of "inhibition" and ( ) a relation of "activation" between genes in the path. (A) Genes modulated between NPC and hES (B) Genes modulated between MPC and hES. (C) Differential expression measured by quantitative RT-PCR for some genes in hES (ES), MPC, NPC. Results are presented as relative expression level compared to hES cells considered arbitrarily as 1 from 3 independent samples. (t-student, * p<0,05).
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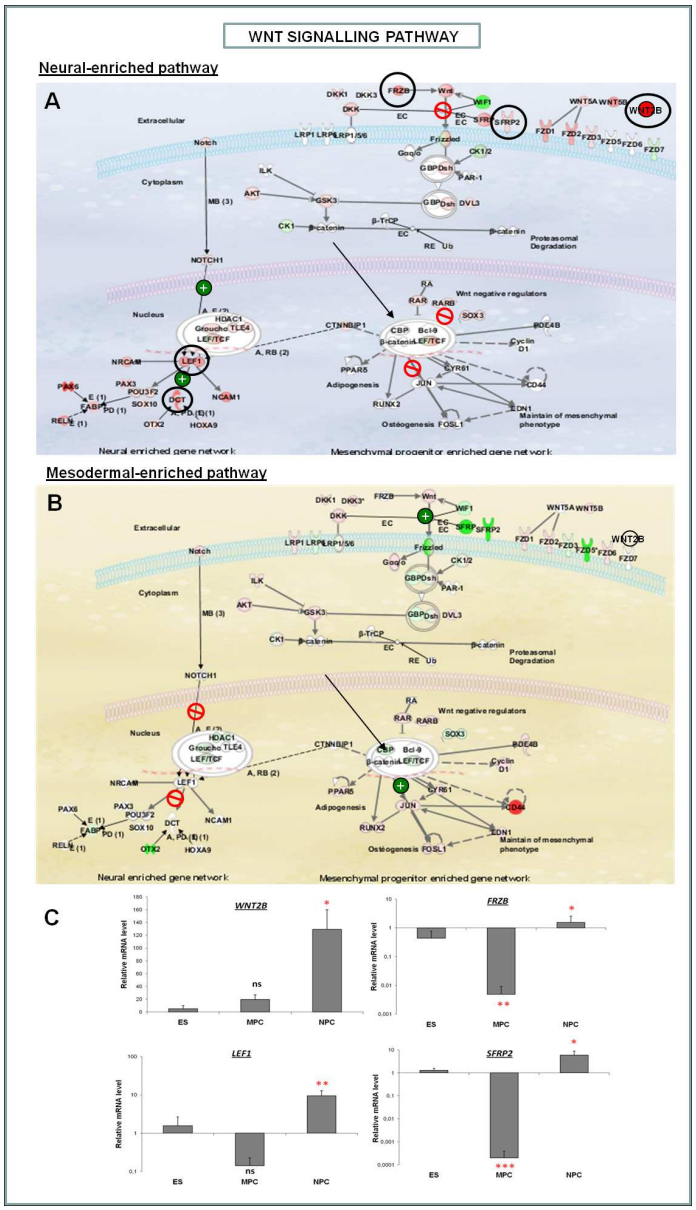

Figure 4 : Comparison of gene expression modulations within canonical Wnt/β catenin pathway either in NPC or in MPC. Same legend as described in Figure 3. (A) Genes specifically modulated between NPC and hES (B) Genes modulated between MPC and hES. (C) Differential expression measured by quantitative RT-PCR for some genes in hES (ES), MPC, NPC. Results are presented as relative expression level compared to hES cells considered arbitrarily as 1 from 3 independent samples. (t-student, *p<0,05; **p<0,01;***p<0,001; ns statistically not significant).
191x334mm (150 x 150 DPI)

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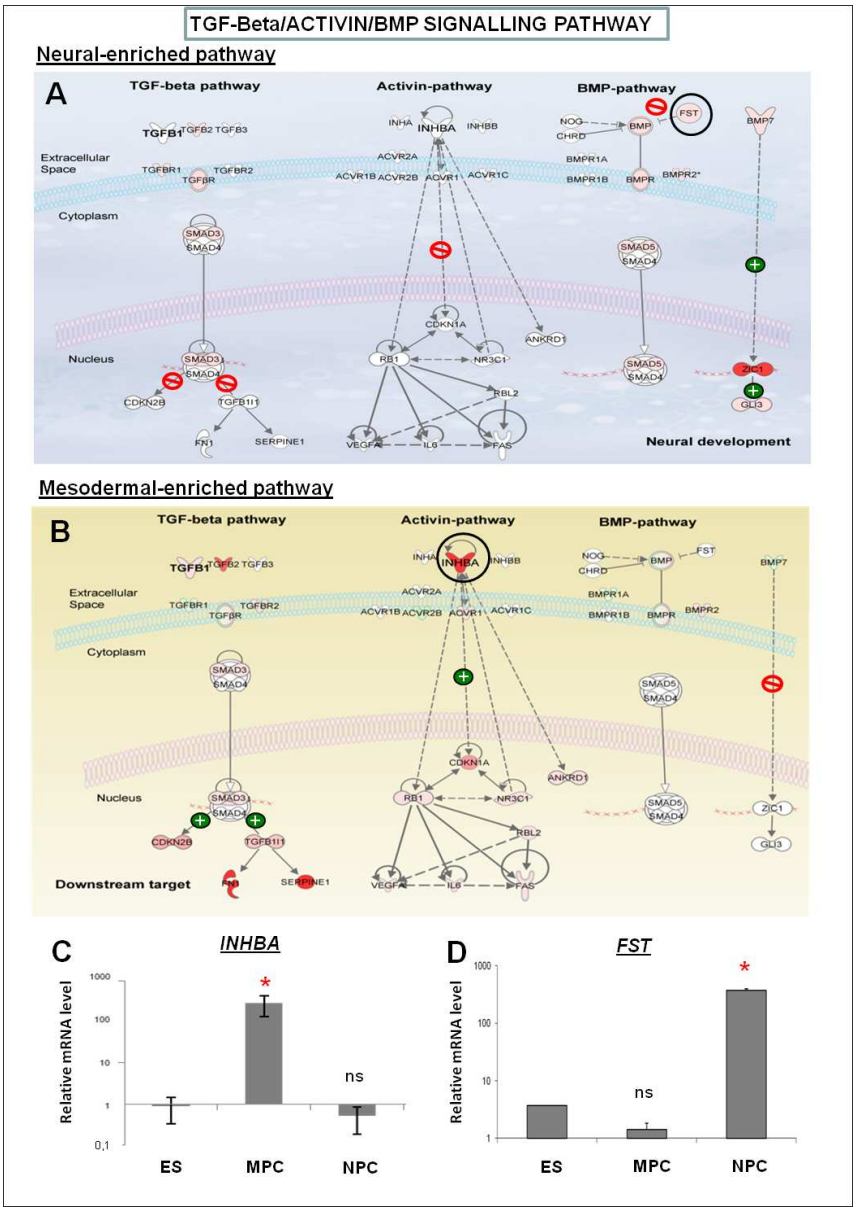

Figure 5: Comparison of gene expression modulations within TGF Beta/Activin/BMP signalling pathway either in NPC or in MPC. Same legend as described in Figure 3. (A) Genes specifically modulated between NPC and hES (B) Genes modulated between MPC and hES. Differential expression measured by quantitative RT-PCR for (C) Inhibin BetaA, INHBA (Activin A) and (D) FST, Follistatin. . (t-student, * p<0,05; ns statistically not significant).
177x250mm (150 x 150 DPI)

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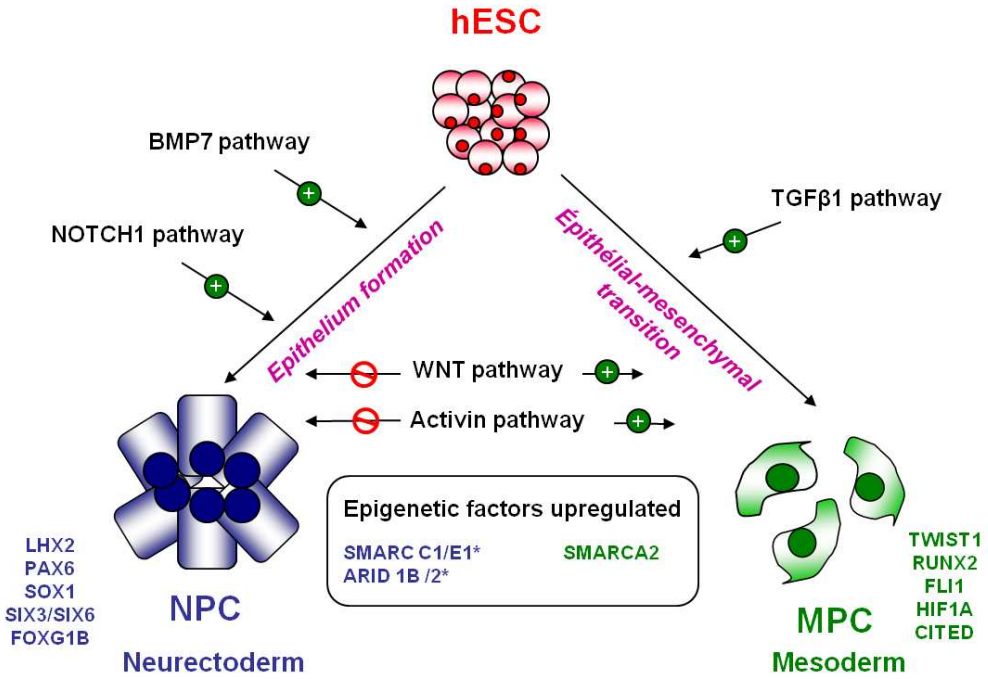

Figure 6 : Comprehensive developmental path model based on our gene expression data which may be controlled the hES cell fate decision toward either neural or mesodermal fates.
182x128mm (150 x 150 DPI)

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Supplementary Figure legends

Figure S1 : Differentiation and characterization of NPC. (A) hES cells were cultured under appropriate conditions until DIV21 to obtain neural rosettes. (B) NCAM-positive cells were isolated by cell sorting. (C) Gene expression patterns of the NCAM positive cells were explored by RT-PCR. Cells do not express undifferentiated markers such as *NANOG* or glial makers such as *GFAP* whereas the induction of some expected neurectodermic markers was observed including *NCAM-1*; *PAX6*; *SOX1*; *OTX2*. No change in the expression of *NES* [Nestin] was observed. Immunostaining revealed that NCAM-positive cells widely expressed NESTIN (D), NCAM, SOX1 (E) and PAX6 (F). Functional characterization of these cells demonstrated their ability to generate both neurons and astrocytes under classical differentiating conditions as highlighted by positive βIII-tubulin (G) and GFAP positive staining (H) respectively.

Figure S2 : Differentiation and characterization of MPC cells. (A) hES cells were cultured on gelatin in appropriate conditions until DIV28 to obtain cells with a fibroblast-like morphology. (B) Phenotyping was performed by FACS as described on material and methods. (C) Immunocytochemistry of two mesodermal markers Stro-1 (left, red) and αSMA (right, green) counterstained with DAPI (nuclei in blue). (D) Capacity of MPC to differentiate toward either osteoblasts or adipocytes as described on material and methods.

Figure S3 : Validation by Q-PCR of key genes identified to be modulated in the transcriptome experiment. (A) Genes specifically modulated between NPC and hES (B) Genes specifically modulated between MPC and hES. Results are presented as relative expression level compared to hES cells considered arbitrarily as 1 from 3 independent samples. (t-student, *p<0,05; **p<0,01;***p<0,001; ns statistically not significant).

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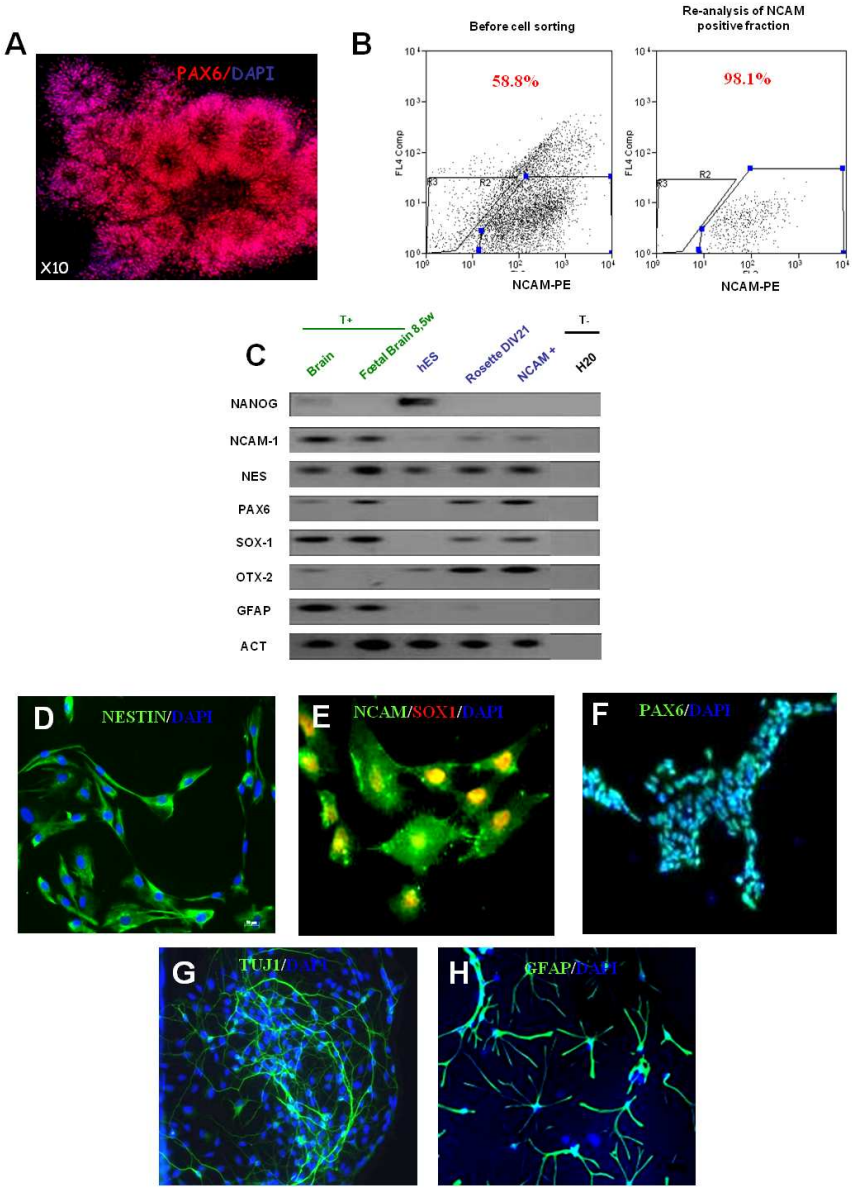

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181x246mm (150 x 150 DPI)

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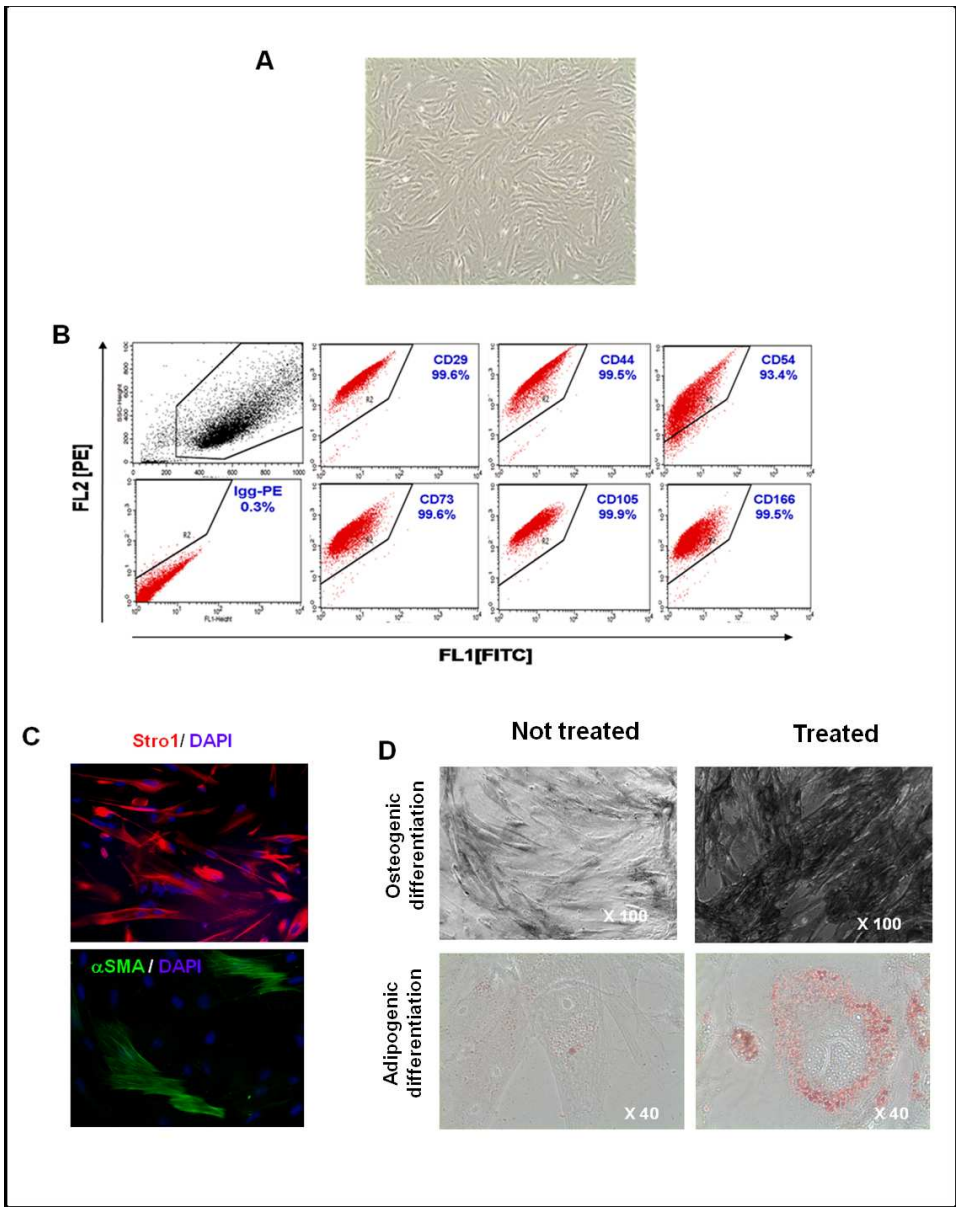

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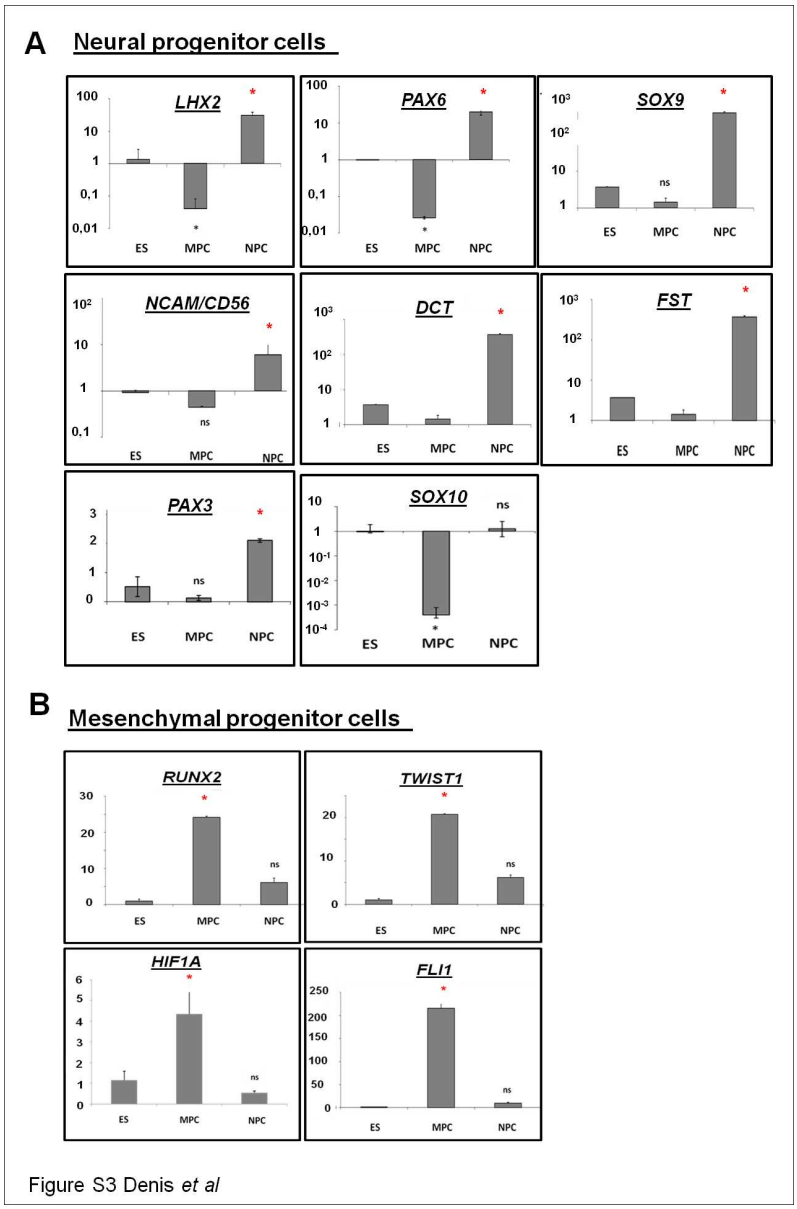

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Table S1 : Primers used for quantitative RT-PCR (qPCR) or PCR experiments

Gene Name	Forward primer	Reverse primer	Use
DCT	F: TTAGGACCAGGACGCCCC	R: CGGTGCCAGGTAACAAATGC	qPCR
DLL1	F: CCA ACT GCC AGC GTG AGA	R: GAA GTC CGC CTT CTT GTT GGT	qPCR
FLI1	F: AGTACCCTTCTGACATCTCCTAC	R: CCCCGTGGAGGTCCAGTAT	qPCR
FRZB	F: AAGTGCCATGATGTGACTGC	R: AACGTTCCTCATCTTCATAGCC	qPCR
FST	F: AGGAGGAAGATGAAGACCAGGAC	R: CCACTCTAGAATAGAAGATATAGGAAAGCT	qPCR
HES1	F: GGTGCTGATAACAGCGGAAT	R: TGAGCAAGTGCTGAGGGTTT	qPCR
HES5	F: ACA TCC TGG AGA TGG CTG TC	R: TAG TCC TGG TGC AGG CTC TT	qPCR
HIF1A	F: ACTAGCCGAGGAAGAACTATGAA	R: TACCCACACTGAGGTTGGTTA	qPCR
INHBA	F: GAA AAG GAG CAG TCG CAC AGA	R: GGC GAT GAG GGT GGT CTT C	qPCR
LEF1	F: GCCTCAGCATGAACAGAGAA	R: CCTTCTGCCAAGAATCTGGT	qPCR
LHX2	F: CCGTGGTCAGCATCTTGTTA	R: CCGTGGTCAGCATCTTGTTA	qPCR
NCAM-1	F: TTGTTTTTCCTGGGAACTGC	R: ATCCTCGCCTGTAACCACAC	qPCR
NOTCH1	F: CGGGTCCACCAGTTTGAATG	R: GTT GTA TTG GTT CGG CAC CAT	qPCR
PAX3	F: CTGGAACATTTGCCCAGACT	R: GCTGTCGGTTCCTAGTCCAG	qPCR
PAX6	F: GCC AGC AAC ACA CCT AGT CA	R: TGT GAG GGG CTG TGT CTG TTC	qPCR
SFRP2	F: GCCTCGATGACCTAGACGAG	R: GATGCAAAGGTCGTTGTCCT	qPCR
SOX9	F: CACAGCTCACTCGACCTTGA	R: TTAGGATCATCTCGGCCATC	qPCR
SOX10	F: AGCCCAGGTGAAGACAGAGA	R: ATAGGGTCCTGAGGGCTGAT	qPCR
TWIST1	F: GTCCGCAGTCTTACGAGGAG	R: GCTTGAGGGTCTGAATCTTGCT	qPCR
WNT2B	F: TGACAATATCCCTGGTTTGG	R: GGTCCAGGGTGGTACAGTTC	qPCR
18S	F: GAG GAT GAG GTG GAA CGT GT	R: TCT TCA GTC GCT CCA GGT CT	qPCR
ACTIN	F: CTCTTCCAGCCTTCCTTCCT	R: AGCACTGTGTTGGCGTACAG	PCR
GFAP	F: CAGGACCTGCTCAATGTCAA	R: ATCTCCACGGTCTTCACCAC	PCR
NANOG	F: ATA CCT CAG CCT CCA GCA GA	R: ATT GTT CCA GGT CTG GTT GC	PCR
NCAM-1	F: TTG TTT TTC CTG GGA ACT GC	R: ATCCTCGCCTGTAACCACAC	PCR
NESTIN	F: AGAGAACCAGGAGCCACTGA	R: TTCTCTTGTCCCGCAGACTT	PCR
OTX2	F: ACAAGTGGCCAATTCACTCC	R: ATGCCCCCAAAGTAGGAAGT	PCR
PAX6	F: GGCAACCTACGCAAGATGGC	R: TGAGGGCTGTGTCTGTTCGG	PCR
SOX1	F: CAATGCGGGGAGGAGAAGTC	R: CTCTGGACCAAACTCTGGCG	PCR

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Table S2 : Genes overexpressed in NPC compared to hES (Fold Change > 2; $\alpha < 0.05$)

Gene Symbol	Entrez Gene	Gene Title	NPC_up	Chromosome Number(Avadis)
37500	4735	septin 2	2,38	chr2
39692	23176	septin 8	2,05	chr5
(vide)	(vide)	CDNA clone IMAGE:4152983	34,42	chr12
15E1.2	283459	Hypothetical protein LOC283459	2,71	chr12
76P	27229	Gamma tubulin ring complex protein (76p gene)	3,37	chr15
ABHD6	57406	abhydrolase domain containing 6	2,79	chr3
ABI2	10152	Abl interactor 2	2,23	chr2
ABL2	27	V-abl Abelson murine leukemia viral oncogene homolog 2 (arg, Abelson-related gene)	2,02	chr1
ABR	29	active BCR-related gene	2,41	chr17
ACOX3	8310	acyl-Coenzyme A oxidase 3, pristanoyl	3,38	chr4
ACSBG2	81616	Acyl-CoA synthetase bubblegum family member 2	2,68	chr19
ACSL3	2181	Acyl-CoA synthetase long-chain family member 3	2,04	chr2
ACTA2	59	actin, alpha 2, smooth muscle, aorta	8,75	chr10
ACY1L2	135293	aminoacylase 1-like 2	2,50	chr6
ADAM12	8038	ADAM metallopeptidase domain 12 (meltrin alpha)	4,25	chr10
ADAM17	6868	ADAM metallopeptidase domain 17 (tumor necrosis factor, alpha, converting enzyme)	2,02	chr2
ADAM19	8728	ADAM metallopeptidase domain 19 (meltrin beta)	2,15	chr5
ADAM23	8745	ADAM metallopeptidase domain 23	2,30	chr2
ADAMTS1	9510	ADAM metallopeptidase with thrombospondin type 1 motif, 1	2,62	chr21
ADAMTS18	170692	ADAM metallopeptidase with thrombospondin type 1 motif, 18	7,82	chr16
ADAMTS6	11174	ADAM metallopeptidase with thrombospondin type 1 motif, 6	5,92	chr5
ADAMTS9	56999	ADAM metallopeptidase with thrombospondin type 1 motif, 9	19,15	chr3
ADARB1	104	adenosine deaminase, RNA-specific, B1 (RED1 homolog rat)	2,79	chr21
ADCY6	112	adenylate cyclase 6	2,06	chr12
ADSSL1	122622	adenylosuccinate synthase like 1	3,26	chr14
AFF3	3899	AF4/FMR2 family, member 3	2,51	chr2
AFF4	27125	AF4/FMR2 family, member 4	3,76	chr5
AFG3L1	172	AFG3 ATPase family gene 3-like 1 (yeast)	2,26	chr16
AG1	440673	AG1 protein	3,17	chr1
AGPAT3	56894	1-acylglycerol-3-phosphate O-acyltransferase 3	2,02	chr21
AGPAT4	56895	1-acylglycerol-3-phosphate O-acyltransferase 4 (lysophosphatidic acid acyltransferase,	3,89	chr6
AGTPBP1	23287	ATP/GTP binding protein 1	3,23	chr9
AHI1	54806	Abelson helper integration site	4,59	chr6
AHNAK	79026	AHNAK nucleoprotein (desmoyokin)	7,26	chr11
AHSA2	130872	AHA1, activator of heat shock 90kDa protein ATPase homolog 2 (yeast)	3,01	chr2
AKAP13	11214	A kinase (PRKA) anchor protein 13	2,53	chr15
AKAP9	10142	A kinase (PRKA) anchor protein (yotiao) 9	2,23	chr7
AKR1C1	1645	aldo-keto reductase family 1, member C1 (dihydrodiol dehydrogenase 1; 20-alpha (3-alp	2,43	chr10
AKR1C2	1646	aldo-keto reductase family 1, member C2 (dihydrodiol dehydrogenase 2; bile acid bindin	2,32	chr10
AKT3	10000	V-akt murine thymoma viral oncogene homolog 3 (protein kinase B, gamma)	2,78	chr1
ALCAM	214	activated leukocyte cell adhesion molecule	2,30	chr3
ALDH1A1	216	aldehyde dehydrogenase 1 family, member A1	8,67	chr9
ALPK2	115701	alpha-kinase 2	4,74	chr18
ALS2CR4	65062	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 4	2,93	chr2
AMIGO2	347902	adhesion molecule with Ig-like domain 2	4,13	chr12
AMOTL1	154810	angiomotin like 1	3,05	chr11
AMOTL2	51421	angiomotin like 2	3,72	chr3
AMPH	273	amphiphysin (Stiff-Man syndrome with breast cancer 128kDa autoantigen)	2,77	chr7
AMY1A	77 /// 278 /// 27	amylase, alpha 1A; salivary /// amylase, alpha 1B; salivary /// amylase, alpha 1C; salivar	2,34	chr1
ANAPC5	51433	Anaphase promoting complex subunit 5	2,42	chr12
ANAPC7	51434	anaphase promoting complex subunit 7	2,70	chr12
ANGPTL1	9068	Angiopoietin-like 1	2,45	chr1
ANGPTL2	23452	angiopoietin-like 2	2,97	chr9
ANK2	287	ankyrin 2, neuronal	4,55	chr4
ANKHD1	04734 /// 5488	ankyrin repeat and KH domain containing 1 /// MASK-4E-BP3 alternate reading frame g	2,18	chr5
ANKMY2	57037	ankyrin repeat and MYND domain containing 2	3,49	chr7
ANKRD10	55608	Ankyrin repeat domain 10	2,05	chr13
ANKRD13	88455	ankyrin repeat domain 13	2,00	chr12
ANKRD38	163782	ankyrin repeat domain 38	21,36	chr1
ANKRD6	22881	ankyrin repeat domain 6	6,12	chr6
ANTXR2	118429	Anthrax toxin receptor 2	2,23	chr4
ANXA13	312	Annexin A13	2,90	chr1
AP3M1	26985	adaptor-related protein complex 3, mu 1 subunit	2,12	chr10
APBA2	321	amyloid beta (A4) precursor protein-binding, family A, member 2 (X11-like)	6,89	chr15
APCDD1	147495	adenomatosis polyposis coli down-regulated 1	2,95	chr18
API5	8539	Apoptosis inhibitor 5	2,93	chr11
APPBP2	10513	amyloid beta precursor protein (cytoplasmic tail) binding protein 2	3,26	chr17
AQP3	360	aquaporin 3	2,73	chr9
ARHGAP24	83478	Rho GTPase activating protein 24	2,62	chr4

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ARHGAP28	79822	Rho GTPase activating protein 28	2,76	chr18
ARHGAP29	9411	Rho GTPase activating protein 29	5,06	chr1
ARHGAP5	394	Rho GTPase activating protein 5	2,87	chr14
ARHGAP6	395	Rho GTPase activating protein 6	3,44	chrX
ARHGDIB	397	Rho GDP dissociation inhibitor (GDI) beta	4,10	chr12
ARHGEF17	9828	Rho guanine nucleotide exchange factor (GEF) 17	3,07	chr11
ARHGEF4	50649	Rho guanine nucleotide exchange factor (GEF) 4	2,38	chr2
ARHGEF7	8874	Rho guanine nucleotide exchange factor (GEF) 7	2,59	chr13
ARID1B	57492	AT rich interactive domain 1B (SWI1-like)	2,02	chr6
ARID2	196528	AT rich interactive domain 2 (ARID, RFX-like)	2,53	chr12
ARID5B	84159	AT rich interactive domain 5B (MRF1-like)	10,53	chr10
ARL6IP5	10550	ADP-ribosylation-like factor 6 interacting protein 5	2,12	chr3
ARL7	10123	ADP-ribosylation factor-like 7	13,85	chr2
ARMC8	25852	armadillo repeat containing 8	2,52	chr3
ARMCX3	51566	armadillo repeat containing, X-linked 3	2,58	chrX
ARNT2	9915	aryl-hydrocarbon receptor nuclear translocator 2	2,67	chr15
ARRDC4	91947	arrestin domain containing 4	2,45	chr15
ARSI	340075	arylsulfatase I	2,07	chr5
ARX	170302	aristaless related homeobox	2,74	chrX
ASCC3L1	23020	Activating signal cointegrator 1 complex subunit 3-like 1	2,88	chr17
ASH1L	55870	POU domain, class 6, transcription factor 1	8,38	(vide)
ASPH	444	Aspartate beta-hydroxylase	4,17	chr8
ASTN	460	astrotactin	4,43	chr1
ASXL1	171023	additional sex combs like 1 (Drosophila)	7,40	chr20
ATAD1	84896	ATPase family, AAA domain containing 1	2,19	chr10
ATBF1	463	AT-binding transcription factor 1	3,03	chr16
ATF6	22926	Activating transcription factor 6	2,82	chr1
ATP10D	57205	ATPase, Class V, type 10D	2,81	chr4
ATP11A	23250	ATPase, Class VI, type 11A	2,28	chr13
ATP1A2	477	ATPase, Na+/K+ transporting, alpha 2 (+) polypeptide	2,48	chr1
ATP2B1	490	ATPase, Ca++ transporting, plasma membrane 1	3,56	chr12
ATP2B4	493	ATPase, Ca++ transporting, plasma membrane 4	2,75	chr1
ATP2C1	27032	ATPase, Ca++ transporting, type 2C, member 1	2,89	chr3
ATP7A	538	ATPase, Cu++ transporting, alpha polypeptide (Menkes syndrome)	3,10	chrX
ATP7B	540	ATPase, Cu++ transporting, beta polypeptide (Wilson disease)	3,42	chr13
ATP9A	10079	ATPase, Class II, type 9A	3,03	chr20
ATRX	546	Alpha thalassemia/mental retardation syndrome X-linked (RAD54 homolog, S. cerevisia	2,13	chrX
AXL	558	AXL receptor tyrosine kinase	2,71	chr19
B3GALT6	126792	UDP-Gal:betaGal beta 1,3-galactosyltransferase polypeptide 6	2,66	chr1
B3GNT5	84002	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 5	3,05	chr3
B3GTL	145173	beta 3-glycosyltransferase-like	2,45	chr13
BACE1	23621	beta-site APP-cleaving enzyme 1	3,31	chr11
BACH2	60468	BTB and CNC homology 1, basic leucine zipper transcription factor 2 /// BTB and CNC h	4,16	chr6
BAT1	7919	HLA-B associated transcript 1	2,16	chr6
BBS1	582	Bardet-Biedl syndrome 1	2,61	chr11
BBS2	583	Bardet-Biedl syndrome 2	2,27	chr16
BCAR3	8412	Breast cancer anti-estrogen resistance 3	2,17	chr1
BCHE	590	butyrylcholinesterase	7,49	chr3
BCL2	596	B-cell CLL/lymphoma 2	2,47	chr18
BCL2L11	10018	BCL2-like 11 (apoptosis facilitator)	3,19	chr2
BCL7A	605	B-cell CLL/lymphoma 7A	2,02	chr12
BDH1	622	3-hydroxybutyrate dehydrogenase, type 1	2,97	chr3
BID	637	BH3 interacting domain death agonist	2,08	chr22
BIN1	274	bridging integrator 1	2,08	chr2
BIRC1	4671	baculoviral IAP repeat-containing 1	3,46	chr5
BIRC6	57448	Splicing factor, arginine/serine-rich 12	2,11	chr2
BMP7	655	Bone morphogenetic protein 7 (osteogenic protein 1)	2,09	chr20
BMPR2	659	bone morphogenetic protein receptor, type II (serine/threonine kinase)	2,29	chr2
BNC1	646	basonuclin 1	2,63	chr15
BNIP3L	665	BCL2/adenovirus E1B 19kDa interacting protein 3-like /// BCL2/adenovirus E1B 19kDa i	2,63	chr8
BOC	91653	brother of CDO	11,85	chr3
BRUNOL5	60680	bruno-like 5, RNA binding protein (Drosophila)	3,57	chr19
BRWD2	55717	bromodomain and WD repeat domain containing 2	3,05	chr10
BST2	684	bone marrow stromal cell antigen 2	2,18	chr19
BTAF1	9044	BTAF1 RNA polymerase II, B-TFIID transcription factor-associated, 170kDa (Mot1 hom	2,00	chr10
BTBD3	22903	BTB (POZ) domain containing 3	2,86	chr20
BTBD5	54813	BTB (POZ) domain containing 5	2,46	chr14
BTBD7	55727	BTB (POZ) domain containing 7	2,03	chr14

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BTG1	694	B-cell translocation gene 1, anti-proliferative	2,19	chr12
BTG2	7832	BTG family, member 2	3,78	chr1
BZRAP1	9256	benzodiazapine receptor (peripheral) associated protein 1	2,39	chr17
C10orf104	119504	chromosome 10 open reading frame 104	2,81	chr10
C10orf18	54906	Chromosome 10 open reading frame 18	2,18	chr10
C10orf30	222389	Chromosome 10 open reading frame 30	2,34	chr10
C10orf32	119032	chromosome 10 open reading frame 32	3,17	chr10
C10orf33	84795	chromosome 10 open reading frame 33	2,13	chr10
C10orf38	221061	chromosome 10 open reading frame 38	2,17	chr10
C10orf45	83641	chromosome 10 open reading frame 45	2,47	chr10
C10orf46	143384	Chromosome 10 open reading frame 46	2,40	chr1
C10orf56	219654	chromosome 10 open reading frame 56	2,65	chr10
C10orf58	84293	Chromosome 10 open reading frame 58	3,91	chr10
C11orf17	56672 /// 81788	chromosome 11 open reading frame 17 /// chromosome 11 open reading frame 17 /// N	5,37	chr1
C11orf9	745	chromosome 11 open reading frame 9	3,92	chr11
C12orf22	81566	chromosome 12 open reading frame 22 /// chromosome 12 open reading frame 22	2,07	chr12
C14orf101	54916	chromosome 14 open reading frame 101	2,39	chr14
C14orf162	56936	chromosome 14 open reading frame 162	4,47	chr14
C14orf32	93487	Chromosome 14 open reading frame 32	2,64	chr14
C14orf39	317761	chromosome 14 open reading frame 39	3,15	chr14
C14orf65	317762	chromosome 14 open reading frame 65	2,02	chr14
C15orf17	57184	chromosome 15 open reading frame 17	2,25	chr15
C15orf21	283651	Chromosome 15 open reading frame 21	2,54	chr15
C15orf29	79768	chromosome 15 open reading frame 29	2,96	chr15
C15orf38	348110	Chromosome 15 open reading frame 38	2,46	chr15
C16orf46	123775	Chromosome 16 open reading frame 46	2,60	(vide)
C16orf48	84080	chromosome 16 open reading frame 48	2,06	chr16
C16orf55	124045	chromosome 16 open reading frame 55	2,59	chr16
C17orf42	79736	Chromosome 17 open reading frame 42	2,99	chr17
C17orf45	125144	Chromosome 17 open reading frame 45	4,23	chr17
C18orf51	125704	chromosome 18 open reading frame 51	2,70	chr18
C1GALT1C1	29071	C1GALT1-specific chaperone 1	3,05	chrX
C1orf104	284618	Chromosome 1 open reading frame 104	2,31	chr1
C1orf112	55732	Chromosome 1 open reading frame 112	2,03	chr1
C1orf139	79971	chromosome 1 open reading frame 139	20,12	chr1
C1orf168	199920	chromosome 1 open reading frame 168	2,86	chr1
C1orf21	81563	chromosome 1 open reading frame 21 /// chromosome 1 open reading frame 21	2,25	chr1
C1orf54	79630	chromosome 1 open reading frame 54	2,08	chr1
C1orf63	57035	chromosome 1 open reading frame 63	2,16	chr1
C1orf85	112770	Chromosome 1 open reading frame 85	2,19	chr1
C1orf9	51430	chromosome 1 open reading frame 9	2,08	chr1
C1QBP	708	Complement component 1, q subcomponent binding protein	2,30	chr17
C1RL	51279	complement component 1, r subcomponent-like	2,35	chr12
C20orf108	116151	chromosome 20 open reading frame 108	2,36	chr20
C20orf112	140688	chromosome 20 open reading frame 112	2,82	chr20
C20orf12	55184	Chromosome 20 open reading frame 12	2,05	chr13
C20orf133	140733	chromosome 20 open reading frame 133	3,27	chr20
C20orf142	128486	chromosome 20 open reading frame 142	2,24	chr20
C20orf194	25943	chromosome 20 open reading frame 194	2,38	chr20
C20orf58	128414	chromosome 20 open reading frame 58	2,37	chr20
C20orf81	64773	chromosome 20 open reading frame 81	2,76	chr20
C21orf25	25966	chromosome 21 open reading frame 25	2,14	chr21
C21orf51	54065	chromosome 21 open reading frame 51	2,85	chr21
C21orf66	94104	Chromosome 21 open reading frame 66	4,60	chr21
C2orf23	65055	chromosome 2 open reading frame 23	2,73	chr2
C2orf4	51072	Chromosome 2 open reading frame 4	2,57	chr2
C3orf15	89876	chromosome 3 open reading frame 15	7,16	chr3
C3orf6	152137	chromosome 3 open reading frame 6	8,53	chr3
C5	727	complement component 5	2,52	chr9
C5orf13	9315	chromosome 5 open reading frame 13	3,04	chr5
C5orf5	51306	chromosome 5 open reading frame 5	2,41	chr5
C6orf111	25957	chromosome 6 open reading frame 111	3,14	chr6
C6orf129	154467	chromosome 6 open reading frame 129	2,24	chr6
C6orf141	135398	chromosome 6 open reading frame 141	4,10	chr6
C6orf145	221749	chromosome 6 open reading frame 145	3,27	chr6
C6orf155	79940	Chromosome 6 open reading frame 155	5,74	chr6
C6orf166	55122	Chromosome 6 open reading frame 166	2,56	chr6
C6orf49	29964	Chromosome 6 open reading frame 49	3,34	chr6

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C6orf59	79992	chromosome 6 open reading frame 59	2,63	chr6
C6orf69	222658	chromosome 6 open reading frame 69	2,01	chr6
C6orf84	22832	chromosome 6 open reading frame 84	2,27	chr6
C6orf89	221477	Chromosome 6 open reading frame 89	2,71	chr6
C7orf19	80228	chromosome 7 open reading frame 19	2,46	chr7
C8orf13	83648	chromosome 8 open reading frame 13	2,22	chr8
C8orf32	55093	chromosome 8 open reading frame 32	2,19	chr8
C8orf70	51101	Chromosome 8 open reading frame 70	2,13	chr8
C8orf72	90362	chromosome 8 open reading frame 72	5,84	chr8
C9orf28	89853	chromosome 9 open reading frame 28	2,56	chr9
C9orf5	23731	chromosome 9 open reading frame 5	2,17	chr9
C9orf7	11094	chromosome 9 open reading frame 7	2,46	chr9
C9orf72	203228	chromosome 9 open reading frame 72	2,90	chr9
C9orf80	58493	Chromosome 9 open reading frame 80	2,73	chr9
CA2	760	carbonic anhydrase II	2,38	chr8
CAB39L	81617	calcium binding protein 39-like	2,55	chr13
CABLES2	81928	Cdk5 and Abl enzyme substrate 2	2,03	chr20
CACNA1A	773	calcium channel, voltage-dependent, P/Q type, alpha 1A subunit	3,30	chr19
CACNB3	784	calcium channel, voltage-dependent, beta 3 subunit	3,47	chr12
CALD1	800	caldesmon 1	2,11	chr7
CALM2	805	Calmodulin 2 (phosphorylase kinase, delta)	2,30	chr2
CALML4	91860	calmodulin-like 4	2,34	chr15
CAMK2D	817	Calcium/calmodulin-dependent protein kinase (CaM kinase) II delta	3,07	chr4
CAMK2N1	55450	calcium/calmodulin-dependent protein kinase II inhibitor 1	7,69	chr1
CAMTA1	23261	calmodulin binding transcription activator 1	3,03	chr1
CAND1	55832	cullin-associated and neddylation-dissociated 1	2,44	chr12
CAP2	10486	CAP, adenylate cyclase-associated protein, 2 (yeast)	2,87	chr6
CAP350	9857	centrosome-associated protein 350	2,11	chr1
CAPN1	823	calpain 1, (mu/I) large subunit	3,99	chr11
CAPN2	824	calpain 2, (m/II) large subunit	4,13	chr1
CAPN6	827	calpain 6	6,34	chrX
CARD8	22900	caspase recruitment domain family, member 8	2,80	chr19
CART1	8092	cartilage paired-class homeoprotein 1	3,09	chr12
CASKIN1	57524	CASK interacting protein 1	2,06	chr16
CAST	831	calpastatin	2,51	chr5
CAST1	26059	CAZ-associated structural protein	2,17	chr3
CBFB	865	core-binding factor, beta subunit	2,57	chr16
CBR4	84869	carbonic reductase 4	2,28	chr4
CBX5	23468	Chromobox homolog 5 (HP1 alpha homolog, Drosophila)	2,23	chr12
CCAR1	55749	Cell division cycle and apoptosis regulator 1	2,07	chr10
CCDC14	64770	coiled-coil domain containing 14	2,04	chr3
CCDC3	83643	coiled-coil domain containing 3	3,17	chr10
CCDC52	152185	Coiled-coil domain containing 52	2,39	chr3
CCNG2	901	Cyclin G2	3,33	chr4
CCNL2	81669	cyclin L2	2,64	chr1_random
CCT6B	10693	chaperonin containing TCP1, subunit 6B (zeta 2)	2,07	chr17
CD24	934	CD24 antigen (small cell lung carcinoma cluster 4 antigen)	2,92	chr5
CD47	961	CD47 antigen (Rh-related antigen, integrin-associated signal transducer)	9,00	chr3
CD99	4267	CD99 antigen	3,43	chrX
CD99L2	83692	CD99 antigen-like 2	2,41	chrX
CDC2L6	23097	cell division cycle 2-like 6 (CDK8-like)	3,25	chr6
CDC42BPB	9578	CDC42 binding protein kinase beta (DMPK-like)	2,84	chr14
CDC42EP3	10602	CDC42 effector protein (Rho GTPase binding) 3	2,66	chr2
CDH10	1008	cadherin 10, type 2 (T2-cadherin)	4,90	chr5
CDH11	1009	cadherin 11, type 2, OB-cadherin (osteoblast)	8,41	chr16
CDH2	1000	cadherin 2, type 1, N-cadherin (neuronal)	6,38	chr18
CDH6	1004	cadherin 6, type 2, K-cadherin (fetal kidney)	16,58	chr5
CDK5RAP3	80279	CDK5 regulatory subunit associated protein 3	2,15	chr17
CDK6	1021	cyclin-dependent kinase 6	3,71	chr7
CDKL3	51265	cyclin-dependent kinase-like 3	2,12	chr5
CDKN1C	1028	Cyclin-dependent kinase inhibitor 1C (p57, Kip2)	3,14	chr11
CDON	50937	Cdon homolog (mouse)	3,91	chr11
CDV1	28981	carnitine deficiency-associated, expressed in ventricle 1	3,30	chr12
CENTB5	116983	centaurin, beta 5	2,05	chr1
CENTG2	116987	Centaurin, gamma 2	2,01	chr2
CEP1	11064	centrosomal protein 1	2,32	chr9
Cep152	22995	KIAA0912 protein	2,03	chr15
Cep164	22897	KIAA1052 protein	2,54	chr11

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CEP68	23177	Centrosomal protein 68kDa	2,54	chr2
CHD1L	9557	Chromodomain helicase DNA binding protein 1-like	2,83	chr1
CHD2	1106	chromodomain helicase DNA binding protein 2	2,21	chr15
CHD7	55636	chromodomain helicase DNA binding protein 7	5,92	chr8
CHD9	80205	Chromodomain helicase DNA binding protein 9	3,66	chr16
CHKB	1120 /// 1375	choline kinase beta /// carnitine palmitoyltransferase 1B (muscle)	3,33	chr22
CHN2	1124	Chimerin (chimaerin) 2	3,09	chr7
CHST5	23563	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 5	2,87	chr16
CHST5	23563 /// 84836	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 5 /// hypothetical protein MGC	2,15	chr16
CIRBP	1153	cold inducible RNA binding protein	3,04	chr19
CKLFSF3	123920	chemokine-like factor superfamily 3	2,39	chr16
CLCN4	1183	Chloride channel 4	2,43	chrX
CLGN	1047	calmegin	6,29	chr4
CLIPR-59	25999	CLIP-170-related protein	3,37	chr19
CLK1	1195	CDC-like kinase 1	2,62	chr2
CMKOR1	57007	chemokine orphan receptor 1	4,25	chr2
CMPK	51727	cytidylate kinase	2,09	chr1
CNIH	10175	Cornichon homolog (Drosophila)	2,08	chr14
CNKSR3	154043	CNKSR family member 3	2,86	chr6
CNNM3	26505	Cyclin M3	2,43	chr2
CNOT7	29883	CCR4-NOT transcription complex, subunit 7	2,28	chr1
CNTN2	6900	contactin 2 (axonal)	3,66	chr1
CNTN4	152330	contactin 4	4,47	chr3
COL11A1	1301	collagen, type XI, alpha 1	13,78	chr1
COL12A1	1303	collagen, type XII, alpha 1	5,97	chr6
COL13A1	1305	collagen, type XIII, alpha 1	2,86	chr10
COL1A1	1277	collagen, type I, alpha 1	3,89	chr17
COL1A2	1278	Collagen, type I, alpha 2	8,89	chr7
COL22A1	169044	collagen, type XXII, alpha 1	2,71	chr8
COL27A1	85301	Collagen, type XXVII, alpha 1	2,69	chr9
COL2A1	1280	collagen, type II, alpha 1 (primary osteoarthritis, spondyloepiphyseal dysplasia, congenit	21,25	chr12
COL3A1	1281	collagen, type III, alpha 1 (Ehlers-Danlos syndrome type IV, autosomal dominant)	64,06	(vide)
COL4A2	1284	collagen, type IV, alpha 2	2,39	chr13
COL4A5	1287	collagen, type IV, alpha 5 (Alport syndrome)	3,80	chrX
COL4A6	1288	collagen, type IV, alpha 6	8,80	chrX
COL5A1	1289	collagen, type V, alpha 1	11,41	chr9
COL5A2	1290	collagen, type V, alpha 2	8,05	chr2
COL6A3	1293	collagen, type VI, alpha 3	27,77	chr2
COL9A1	1297	collagen, type IX, alpha 1	3,10	chr6
COLEC12	81035	collectin sub-family member 12 /// collectin sub-family member 12	8,88	chr18
COMMD3	23412	COMM domain containing 3	2,43	chr10
COPG2	26958	Coatomer protein complex, subunit gamma 2	6,24	chr7
CORO1C	23603	coronin, actin binding protein, 1C	2,55	chr12
COX4I1	1327	cytochrome c oxidase subunit IV isoform 1	2,15	chr16
CPAMD8	27151	C3 and PZP-like, alpha-2-macroglobulin domain containing 8	2,63	chr19
CPE	1363	carboxypeptidase E	3,56	chr4
CPS1	1373	carbamoyl-phosphate synthetase 1, mitochondrial	4,28	chr2
CPXM	56265	carboxypeptidase X (M14 family)	2,40	chr20
CREB5	9586	cAMP responsive element binding protein 5	2,73	chr7
CRELD1	78987	cysteine-rich with EGF-like domains 1	2,58	chr3
CREM	1390	cAMP responsive element modulator	2,01	chr10
CRLF3	51379	Cytokine receptor-like factor 3	5,71	chr17
CROCC	9696	ciliary rootlet coiled-coil, rootletin	2,42	chr1
CROT	54677	carnitine O-octanoyltransferase	4,57	chr7
CRYZL1	9946	crystallin, zeta (quinone reductase)-like 1	3,27	chr21
CSAD	51380	cysteine sulfinic acid decarboxylase	3,08	chr12
CSK	1445	c-src tyrosine kinase	2,02	chr15
CSPG3	1463	chondroitin sulfate proteoglycan 3 (neurocan)	3,86	chr19
CTDSPL	10217	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase-l	2,40	chr3
CTGLF1	99753 /// 39976	centaurin, gamma-like family, member 1 /// hypothetical gene supported by AK093334;	2,44	chr10
CTGLF1 /// LOC3	99753 /// 39976	centaurin, gamma-like family, member 1 /// hypothetical gene supported by AK093334;	2,86	chr10
CTNNA1	1495	Catenin (cadherin-associated protein), alpha 1, 102kDa	2,08	chr5
CTNNA2	1496	catenin (cadherin-associated protein), alpha 2	7,17	chr2
CTNNBIP1	56998	catenin, beta interacting protein 1	3,94	chr1
CTNND2	1501	catenin (cadherin-associated protein), delta 2 (neural plakophilin-related arm-repeat prot	3,29	chr5
CTTNBP2	83992	Cortactin binding protein 2	2,30	chr7
CTTNBP2NL	55917	CTTNBP2 N-terminal like	2,50	chr1
CUEDC1	404093	CUE domain containing 1	2,03	chr17

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CUGBP2	10659	CUG triplet repeat, RNA binding protein 2	3,44	chr10
CUL1	8454	Cullin 1	2,13	chr7
CUL3	8452	Cullin 3	3,04	chr2
CUL7	9820	cullin 7	2,40	chr6
CUTL1	1523	Cut-like 1, CCAAT displacement protein (Drosophila)	2,31	chr7
CXCL14	9547	chemokine (C-X-C motif) ligand 14	16,10	chr5
CXCR4	7852	chemokine (C-X-C motif) receptor 4	4,95	chr2
CXorf33	139322	chromosome X open reading frame 33	2,21	chrX
CXorf39	139231	Chromosome X open reading frame 39	2,21	chrX
CXXC4	80319	CXXC finger 4	3,00	chr4
CYFIP2	26999	cytoplasmic FMR1 interacting protein 2 /// cytoplasmic FMR1 interacting protein 2	2,34	chr5
D2LIC	51626	dynein 2 light intermediate chain	2,17	chr2
DAB2	1601	Disabled homolog 2, mitogen-responsive phosphoprotein (Drosophila)	3,84	chr5
DACH1	1602	dachshund homolog 1 (Drosophila)	27,40	chr13
DCBLD2	131566	discoidin, CUB and LCCL domain containing 2	2,47	chr3
DCHS1	8642	dachsous 1 (Drosophila)	2,11	chr11
DCT	1638	dopachrome tautomerase (dopachrome delta-isomerase, tyrosine-related protein 2)	17,25	chr13
DCTN3	11258	dynactin 3 (p22)	2,42	chr9
DCUN1D4	23142	DCN1, defective in cullin neddylation 1, domain containing 4 (S. cerevisiae)	3,75	chr4
DCX	1641	doublecortex; lissencephaly, X-linked (doublecortin)	3,86	chrX
DDEF1	50807	development and differentiation enhancing factor 1	2,69	chr8
DDEF2	8853	development and differentiation enhancing factor 2	4,81	chr2
DDHD2	23259	DDHD domain containing 2	5,47	chr8
DDR2	4921	Discoidin domain receptor family, member 2	4,77	chr1
DDX17	10521	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17	2,13	chr22
DDX50	79009	DEAD (Asp-Glu-Ala-Asp) box polypeptide 50	2,13	chr10
DENND2A	27147	DENN/MADD domain containing 2A	3,98	chr7
DERA	51071	2-deoxyribose-5-phosphate aldolase homolog (C. elegans)	2,83	chr12
DFNA5	1687	deafness, autosomal dominant 5	2,39	chr7
DGCR8	54487	DiGeorge syndrome critical region gene 8	2,06	chr22
DGKD	8527	diacylglycerol kinase, delta 130kDa	2,09	chr2
DHX32	55760	DEAH (Asp-Glu-Ala-His) box polypeptide 32	2,52	chr10
DHX57	90957	DEAH (Asp-Glu-Ala-Asp/His) box polypeptide 57	2,16	chr2
DICER1	23405	Dicer1, Dcr-1 homolog (Drosophila)	2,11	chr14
DIO3	1735	deiodinase, iodothyronine, type III	2,97	chr14
DIP13B	55198	DIP13 beta	2,42	chr12
DIP2A	23181	DIP2 disco-interacting protein 2 homolog A (Drosophila)	2,66	chr21
DJ328E19.C1.1 ///6 /// 440670 ///		hypothetical protein DJ328E19.C1.1 /// hypothetical protein FLJ20719 /// hypothetical pr	3,04	chr1_random
DJ328E19.C1.1 ///01967 /// 44067		hypothetical protein DJ328E19.C1.1 /// hypothetical protein FLJ20719 /// hypothetical pr	2,46	chr1_random
DKFZp313A2432	258010	hypothetical protein DKFZp313A2432	2,35	chr11
DKFZP434B0335	25851	DKFZP434B0335 protein	2,74	chr7
DKFZP434F0318	81575	hypothetical protein DKFZp434F0318 /// hypothetical protein DKFZp434F0318	2,14	chr12
DKFZP434H0115	83538	hypothetical protein DKFZp434H0115	2,36	chr17
DKFZp434P055	91531	hypothetical protein DKFZp434P055	2,42	chr2
DKFZp451M2119	285023	Hypothetical protein DKFZp451M2119	3,08	chr2
DKFZP564D172	83989	hypothetical protein DKFZp564D172	2,09	chr5
DKFZP566N034	81615	hypothetical protein DKFZp566N034	2,62	chr2
DKFZP586H2123	25891	regeneration associated muscle protease	13,26	chr11
DKFZP761M1511	54492	hypothetical protein DKFZP761M1511	2,22	chr5
DKFZP761N09121	57183	hypothetical protein DKFZp761N09121	10,12	(vide)
DKFZp761O2018	92293	hypothetical protein DKFZp761O2018	4,07	chr12
DKFZp762A217	160335	hypothetical protein DKFZp762A217	3,19	chr12
DKK1	22943	dickkopf homolog 1 (Xenopus laevis)	4,99	chr10
DLC1	10395	deleted in liver cancer 1	8,48	chr8
DLK1	8788	delta-like 1 homolog (Drosophila)	39,62	chr14
DLL1	28514	delta-like 1 (Drosophila)	24,34	chr6
DLX1	1745	distal-less homeo box 1	2,82	chr2
DLX2	1746	distal-less homeo box 2	4,26	chr2
DMD	1756	dystrophin (muscular dystrophy, Duchenne and Becker types)	3,45	chrX
DMRT3	58524	doublesex and mab-3 related transcription factor 3	3,27	chr9
DMXL2	23312	Dmx-like 2	5,22	chr15
DNAJC1	64215	DnaJ (Hsp40) homolog, subfamily C, member 1	3,02	chr10
DNAJC12	56521	DnaJ (Hsp40) homolog, subfamily C, member 12	3,13	chr10
DNAJC6	9829	DnaJ (Hsp40) homolog, subfamily C, member 6	3,57	chr1
DNALI1	7802	dynein, axonemal, light intermediate polypeptide 1	4,36	chr1
DNCH2	79659	dynein, cytoplasmic, heavy polypeptide 2	2,28	chr11
DNM1	1759	dynamin 1	4,23	chr9
DOC1	11259	downregulated in ovarian cancer 1	3,17	chr3

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DOCK1	1793	dedicator of cytokinesis 1	2,41	chr10
DOCK3	1795	dedicator of cytokinesis 3	2,46	chr3
DOCK7	85440	Dedicator of cytokinesis 7	2,75	chr1
DOT1L	84444	DOT1-like, histone H3 methyltransferase (S. cerevisiae)	2,79	chr19
DPY19L1	23333	dpy-19-like 1 (C. elegans)	2,45	chr7
DPY19L2	283417	dpy-19-like 2 (C. elegans)	2,11	chr7
DPYD	1806	dihydropyrimidine dehydrogenase	2,27	chr1
DPYSL5	56896	dihydropyrimidinase-like 5	3,84	chr2
DREV1	51108	DORA reverse strand protein 1	2,32	chr16
DSC2	1824	desmocollin 2	4,07	chr18
DSC3	1825	desmocollin 3	3,96	chr18
DSCR1	1827	Down syndrome critical region gene 1	2,04	chr21
DSCR6	53820	Down syndrome critical region gene 6	2,65	chr21
DST	667	dystonin	4,69	chr6
DTX4	23220	deltex 4 homolog (Drosophila)	4,18	chr11
DUSP4	1846	dual specificity phosphatase 4	7,87	chr8
DVL3	1857	dishevelled, dsh homolog 3 (Drosophila)	2,40	chr3
DZIP1	22873	DAZ interacting protein 1	2,07	chr13
EBF	1879	Early B-cell factor	2,92	chr5
ECHDC1	55862	Enoyl Coenzyme A hydratase domain containing 1	3,52	chr6
EDG2	1902	endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 2	4,01	chr9
EDG3	1903	endothelial differentiation, sphingolipid G-protein-coupled receptor, 3	7,18	chr9
EDNRA	1909	endothelin receptor type A	6,36	chr4
EFEMP1	2202	EGF-containing fibulin-like extracellular matrix protein 1	3,92	chr2
EFEMP2	30008	EGF-containing fibulin-like extracellular matrix protein 2	2,51	chr11
EFHC1	114327	EF-hand domain (C-terminal) containing 1	3,83	chr6
EFHD1	80303	EF-hand domain family, member D1	3,22	chr2
EFNA1	1942	ephrin-A1	2,08	chr1
EFNA5	1946	Ephrin-A5	10,87	chr5
EFNB2	1948	ephrin-B2	5,61	chr13
EFNB3	1949	ephrin-B3	3,08	chr17
EFS	10278	embryonal Fyn-associated substrate	3,80	chr14
EGFL5	1955	EGF-like-domain, multiple 5	2,94	chr9
EGFR	1956	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homo	2,62	chr7
EGR1	1958	Early growth response 1	6,71	chr5
EIF1	10209	Eukaryotic translation initiation factor 1	2,08	chr17
EIF2C3	192669	eukaryotic translation initiation factor 2C, 3	2,38	chr1
EIF2C4	192670	Eukaryotic translation initiation factor 2C, 4	2,87	chr1
EIF2S1	1965	eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa	2,63	chr14
EIF4G3	8672	Eukaryotic translation initiation factor 4 gamma, 3	2,64	chr1
EIF5	1983	eukaryotic translation initiation factor 5	2,08	chr14
ELAC1	55520	elaC homolog 1 (E. coli)	2,01	chr18
ELAVL1	1994	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 1 (Hu antigen R)	3,31	chr19
ELAVL4	1996	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 4 (Hu antigen D)	4,59	chr1
ELOVL2	54898	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 2	5,49	chr6
ELOVL5	60481	ELOVL family member 5, elongation of long chain fatty acids (FEN1/Elo2, SUR4/Elo3-lik	2,05	chr6
EMID2	136227	EMI domain containing 2	2,55	chr7
EMILIN2	84034	elastin microfibril interfacer 2 /// elastin microfibril interfacer 2	2,47	chr18
EML1	2009	echinoderm microtubule associated protein like 1	2,27	chr14
EMP1	2012	epithelial membrane protein 1	5,85	chr12
EMP2	2013	epithelial membrane protein 2	3,91	chr16
EMX2	2018	empty spiracles homolog 2 (Drosophila)	10,30	chr10
EMX2OS	196047	empty spiracles homolog 2 (Drosophila) opposite strand	2,81	chr10
ENAH	55740	enabled homolog (Drosophila)	2,55	chr1
ENC1	8507	ectodermal-neural cortex (with BTB-like domain)	8,44	chr5
ENO3	2027	enolase 3 (beta, muscle)	3,30	chr17
ENOSF1	55556	enolase superfamily member 1	2,13	chr18
ENPP2	5168	ectonucleotide pyrophosphatase/phosphodiesterase 2 (autotaxin)	2,43	chr8
ENTPD4	9583	ectonucleoside triphosphate diphosphohydrolase 4	3,54	chr8
EP400	57634	E1A binding protein p400	2,38	chr12
EPAS1	2034	endothelial PAS domain protein 1	8,51	chr2
EPB41	2035	Erythrocyte membrane protein band 4.1 (elliptocytosis 1, RH-linked)	2,55	chr1
EPB41L5	57669	erythrocyte membrane protein band 4.1 like 5	4,25	chr2
EPC1	80314	Enhancer of polycomb homolog 1 (Drosophila)	2,24	chr10
EPHA4	2043	EPH receptor A4	12,56	chr2
EPHA7	2045	EPH receptor A7	7,42	chr6
EPHB2	2048	EPH receptor B2	2,96	chr1
EPHB3	2049	EPH receptor B3	2,56	chr3

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EPM2AIP1	9852	EPM2A (laforin) interacting protein 1	6,40	chr3
EPS8	2059	epidermal growth factor receptor pathway substrate 8	3,04	chr12
ESRRG	2104	estrogen-related receptor gamma	2,58	chr1
EVI1	2122	ecotropic viral integration site 1	9,29	chr3
EVL	51466	Enah/Vasp-like	3,39	chr14
EWSR1	2130	Ewing sarcoma breakpoint region 1	3,64	chr22
EXT1	2131	Exostoses (multiple) 1	2,75	chr8
EYA1	2138	eyes absent homolog 1 (Drosophila)	3,91	chr8
EYA2	2139	eyes absent homolog 2 (Drosophila)	4,33	chr20
EYA4	2070	Eyes absent homolog 4 (Drosophila)	4,11	chr6
F2RL2	2151	coagulation factor II (thrombin) receptor-like 2	7,64	chr5
FABP7	2173	fatty acid binding protein 7, brain	7,66	chr6
FAM13C1	220965	family with sequence similarity 13, member C1	2,78	chr10
FAM19A5	25817	family with sequence similarity 19 (chemokine (C-C motif)-like), member A5	2,06	chr22
FAM46A	55603	family with sequence similarity 46, member A	2,92	chr6
FAM51A1	54960	Family with sequence similarity 51, member A1	2,03	chrX
FAM64A	54478	Family with sequence similarity 64, member A	2,03	chr17
FAM77D	286183	Family with sequence similarity 77, member D	5,59	chr8
FAM7A2	89839	Family with sequence similarity 7, member A2	2,31	(vide)
FAM89A	375061	family with sequence similarity 89, member A	4,01	chr1
FAM89B	23625	family with sequence similarity 89, member B	2,11	chr11
FANCA	2175	Fanconi anemia, complementation group A	2,35	chr16
FANK1	92565	fibronectin type III and ankyrin repeat domains 1	3,56	chr10
FARP1	10160	FERM, RhoGEF (ARHGEF) and pleckstrin domain protein 1 (chondrocyte-derived)	2,75	chr13
FBLN1	2192	fibulin 1	2,75	chr22
FBN1	2200	fibrillin 1 (Marfan syndrome)	10,66	chr15
FBN2	2201	fibrillin 2 (congenital contractural arachnodactyly)	11,24	chr5
FBXL14	144699	F-box and leucine-rich repeat protein 14	6,25	chr12
FBXL17	64839	F-box and leucine-rich repeat protein 17	2,15	chr5
FBXO33	254170	F-box protein 33	2,04	chr14
FBXW8	26259	F-box and WD-40 domain protein 8	2,27	chr12
FCHSD2	9873	FCH and double SH3 domains 2	2,45	chr11
FCMD	2218	Fukuyama type congenital muscular dystrophy (fukutin)	2,04	chr9
FGF7	2252	Fibroblast growth factor 7 (keratinocyte growth factor)	2,25	(vide)
FGF9	2254	fibroblast growth factor 9 (glia-activating factor)	21,83	chr13
FHOD3	80206	formin homology 2 domain containing 3	7,10	chr18
FIGN	55137	Fidgetin	4,91	chr2
FILIP1	27145	filamin A interacting protein 1	3,28	chr6
FJX1	24147	four jointed box 1 (Drosophila)	6,85	chr11
FKBP7	51661	FK506 binding protein 7	3,51	chr2
FKBP9	11328	FK506 binding protein 9, 63 kDa	3,15	chr7
FLJ10081	55683	hypothetical protein FLJ10081	2,26	chr2
FLJ10099	55069	Hypothetical protein FLJ10099	2,31	chr7
FLJ10154	55082	Hypothetical protein FLJ10154	4,51	chr13
FLJ10159	55084	hypothetical protein FLJ10159	3,28	chr6
FLJ10178	55086	hypothetical protein FLJ10178	3,09	chrX
FLJ10213	55096	hypothetical protein FLJ10213	2,20	chr3
FLJ10287	54482	hypothetical protein FLJ10287	3,29	chr1
FLJ10357	55701	hypothetical protein FLJ10357	4,05	chr14
FLJ10996	54520	hypothetical protein FLJ10996	2,19	chr2
FLJ12700	79970	hypothetical protein FLJ12700	2,18	chr7
FLJ13089	80018	hypothetical protein FLJ13089	2,41	chr12
FLJ13197	79667	hypothetical protein FLJ13197	2,52	chr4
FLJ14054	79614	hypothetical protein FLJ14054	9,16	chr5
FLJ14525	84886	hypothetical protein FLJ14525	2,08	chr1
FLJ14640	84902	hypothetical protein FLJ14640	2,08	chr19
FLJ16008	339761	FLJ16008 protein	3,85	chr2
FLJ20054	54530	hypothetical protein FLJ20054	3,69	chr1
FLJ20719	55672	hypothetical protein FLJ20719	4,93	chr1
FLJ20719	40670 /// 4406	hypothetical protein FLJ20719 /// hypothetical protein LOC200030 /// hypothetical protein	2,59	chr1
FLJ20719	40673 /// 5567	hypothetical protein FLJ20719 /// AG1 protein	2,41	chr1_random
FLJ20719	0 /// 440673 ///	hypothetical protein FLJ20719 /// hypothetical protein MGC8902 /// AE01 mRNA /// AG1	2,35	chr1
FLJ21125	79680	hypothetical protein FLJ21125	2,04	chr22
FLJ21127	79600	hypothetical protein FLJ21127	2,77	chr12
FLJ21616	79618	Hypothetical protein FLJ21616	2,28	chr8
FLJ21827	56912	hypothetical protein FLJ21827	2,19	chr11
FLJ21865	64772	endo-beta-N-acetylglucosaminidase	2,32	chr17
FLJ21986	79974	hypothetical protein FLJ21986	3,82	chr7

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FLJ22313	64224	hypothetical protein FLJ22313	2,34	chr7
FLJ22471	80212	limkain beta 2	6,73	chr12
FLJ23191	79625	hypothetical protein FLJ23191	4,87	chr4
FLJ23342	79684	Hypothetical protein FLJ23342	2,60	chr11
FLJ23518	79780	hypothetical protein FLJ23518	2,21	chr11
FLJ25076	134111	similar to CG4502-PA	2,40	chr5
FLJ25476	149076	FLJ25476 protein	2,24	chr1
FLJ25694	283492	hypothetical protein FLJ25694	5,59	chr13
FLJ25715	284241	Hypothetical protein FLJ25715	2,12	chr18
FLJ25967	440823	hypothetical gene supported by AK098833	2,71	chr22
FLJ30092	196515	AF-1 specific protein phosphatase /// AF-1 specific protein phosphatase	2,01	chr12
FLJ30851	375190	FLJ30851 protein	2,71	chr2
FLJ30901	150378	hypothetical protein FLJ30901	7,03	chr22
FLJ31438	130162	hypothetical protein FLJ31438	2,95	chr2
FLJ31818	154743	hypothetical protein FLJ31818	2,18	chr7
FLJ31951	153830	Hypothetical protein FLJ31951	3,92	chr5
FLJ34208	401106	Hypothetical gene supported by AK091527	2,15	chr3
FLJ34443	285464	hypothetical protein FLJ34443	2,90	chr4
FLJ36031	168455	Hypothetical protein FLJ36031	3,36	chr7
FLJ36166	349152	Hypothetical protein FLJ36166	2,36	chr7
FLJ37440	129804	hypothetical protein FLJ37440	2,05	chr2
FLJ37562	134553	hypothetical protein FLJ37562	2,50	chr5
FLJ38379	285097	hypothetical protein FLJ38379	2,87	chr2
FLJ39155	133584	hypothetical protein FLJ39155	3,06	chr5
FLJ39378	353116	hypothetical protein FLJ39378	2,38	chr12
FLJ39653	202020	hypothetical protein FLJ39653	2,30	chr4
FLJ42393	401105	FLJ42393 protein	2,27	chr3
FLJ42709	441094	hypothetical gene supported by AK124699	3,93	chr5
FLJ42957	400077	FLJ42957 protein	2,28	chr12
FLJ44216	375484	FLJ44216 protein	2,75	chr5
FLJ45187	387640	FLJ45187 protein	13,87	chr10
FLJ45831	400576	FLJ45831 protein /// MRNA; cDNA DKFZp564A222 (from clone DKFZp564A222)	2,06	chr2
FLJ90757	440465	FLJ90757 protein	4,70	chr17
FLRT2	23768	fibronectin leucine rich transmembrane protein 2	6,72	chr14
FLRT3	23767	fibronectin leucine rich transmembrane protein 3	20,56	chr20
FNBP1	23048	Formin binding protein 1	3,16	chr9
FNBP1L	54874	Formin binding protein 1-like	2,21	chr1
FNBP4	23360	formin binding protein 4	2,24	chr11
FNDC5	252995	fibronectin type III domain containing 5	3,30	chr1
FOSL2	2355	FOS-like antigen 2	2,36	chr2
FOXC1	2296	forkhead box C1	5,17	chr6
FOXG1B	2290	forkhead box G1B	14,70	chr14
FOXK1	221937	Forkhead box K1	2,38	chr7
FOXO3A	2309	forkhead box O3A	2,14	chr6
FOXP1	27086	Forkhead box P1	3,05	chr3
FRMD4A	55691	FERM domain containing 4A	3,61	chr10
FRMD4A	1810 /// 55691	FERM domain containing 4A /// Down-regulator of transcription 1, TBP-binding (negative	6,08	chr1
FRMD4B	23150	FERM domain containing 4B	2,36	chr3
FRMD6	122786	FERM domain containing 6	3,92	chr14
FRZB	2487	frizzled-related protein	13,30	chr2
FSD1CL	405752	GTPase activating Rap/RanGAP domain-like 1	3,17	chr9
FSD1L	405752	FSD1-like	2,01	chr9
FST	10468	follistatin	3,11	chr5
FUBP1	8880	Far upstream element (FUSE) binding protein 1	2,47	chr1
FXYD6	53826	FXYD domain containing ion transport regulator 6	2,91	chr11
FYTTD1	84248	forty-two-three domain containing 1	2,72	chr3
FZD1	8321	frizzled homolog 1 (Drosophila)	10,39	chr7
FZD2	2535	frizzled homolog 2 (Drosophila)	10,50	chr17
FZD3	7976	frizzled homolog 3 (Drosophila)	3,20	chr8
GAB2	9846	GRB2-associated binding protein 2	2,33	chr11
GABRP	2568	gamma-aminobutyric acid (GABA) A receptor, pi	15,76	chr5
GAD1	2571	glutamate decarboxylase 1 (brain, 67kDa)	3,77	chr2
GALNT10	55568	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 10	2,68	chr5
GALNTL1	57452	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase-lik	3,56	chr14
GAPVD1	26130	GTPase activating protein and VPS9 domains 1	2,15	(vide)
GAS1	2619	growth arrest-specific 1	29,68	chr9
GAS2L3	283431	growth arrest-specific 2 like 3	2,33	chr12
GAS6	2621	growth arrest-specific 6	2,91	chr13

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GAS7	8522	growth arrest-specific 7	2,85	chr17
GATA3	2625	GATA binding protein 3	5,80	chr10
GDPD1	284161	Glycerophosphodiester phosphodiesterase domain containing 1	2,17	chr17
GGA2	23062	golgi associated, gamma adaptin ear containing, ARF binding protein 2	2,26	chr16
GGH	8836	gamma-glutamyl hydrolase (conjugase, folylpolygammaglutamyl hydrolase)	2,88	chr8
GKAP1	80318	G kinase anchoring protein 1	3,06	chr9
GLCCI1	113263	glucocorticoid induced transcript 1	2,40	chr7
GLI3	2737	GLI-Kruppel family member GLI3 (Greig cephalopolysyndactyly syndrome)	4,08	chr7
GLIS3	169792	GLIS family zinc finger 3	9,00	chr9
GLRB	2743	glycine receptor, beta	2,22	chr4
GLT25D2	23127	glycosyltransferase 25 domain containing 2	11,19	chr1
GLUD1	2746	glutamate dehydrogenase 1	2,37	chrX
GNAS	2778	GNAS complex locus	2,01	chr20
GNAZ	2781	guanine nucleotide binding protein (G protein), alpha z polypeptide	4,73	chr22
GNB1	2782	guanine nucleotide binding protein (G protein), beta polypeptide 1	2,25	chr1
GNE	10020	glucosamine (UDP-N-acetyl)-2-epimerase/N-acetylmannosamine kinase	2,12	chr9
GNG12	55970	guanine nucleotide binding protein (G protein), gamma 12	3,30	chr1
GNG2	54331	Guanine nucleotide binding protein (G protein), gamma 2	2,66	chr14
GOLGA8A	23015	golgi autoantigen, golgin subfamily a, 8A	6,17	chr15
GOLGA8A	23015 /// 44027	golgi autoantigen, golgin subfamily a, 8A /// golgi autoantigen, golgin subfamily a, 8B	4,71	chr15
GOLGA8B	440270	golgi autoantigen, golgin subfamily a, 8B	5,30	chr15
GOPC	57120	Golgi associated PDZ and coiled-coil motif containing	3,70	chr6
GOSR2	9570	Golgi SNAP receptor complex member 2	2,63	chr17
GPC1	2817	glypican 1	3,13	chr2
GPC3	2719	glypican 3	9,11	chrX
GPC6	10082	Glypican 6	3,22	chr13
GPM6A	2823	glycoprotein M6A	17,26	chr4
GPR153	387509	G protein-coupled receptor 153	2,69	chr1
GPR161	23432	G protein-coupled receptor 161	6,56	chr1
GPR23	2846	G protein-coupled receptor 23	2,36	chrX
GPR24	2847	G protein-coupled receptor 24	2,29	chr22
GPR56	9289	G protein-coupled receptor 56	10,06	chr16
GPRASP1	9737	G protein-coupled receptor associated sorting protein 1	3,08	chrX
GPSM1	26086	G-protein signalling modulator 1 (AGS3-like, C. elegans)	4,14	chr9
GRAMD1B	57476	GRAM domain containing 1B	2,28	chr11
GREB1	9687	GREB1 protein	4,39	chr2
GREM1	26585	gremlin 1, cysteine knot superfamily, homolog (Xenopus laevis)	6,32	chr15
GRHL1	29841	grainyhead-like 1 (Drosophila)	2,15	chr2
GRIA1	2890	glutamate receptor, ionotropic, AMPA 1	4,04	chr5
GRK5	2869	G protein-coupled receptor kinase 5	2,95	chr10
GRM3	2913	glutamate receptor, metabotropic 3	3,02	chr7
GSDML	55876	gasdermin-like	2,64	chr17
GSK3B	2932	Glycogen synthase kinase 3 beta	3,45	chr3
GSTA4	2941	glutathione S-transferase A4	3,57	chr6
GSTM3	2947	glutathione S-transferase M3 (brain)	3,47	chr1
GUCY1A3	2982	guanylate cyclase 1, soluble, alpha 3	8,68	chr4
H19	283120	H19, imprinted maternally expressed untranslated mRNA	28,54	chr11
H1F0	3005	H1 histone family, member 0	3,22	chr22
H1FX	8971	H1 histone family, member X	2,56	chr3
H2AFV	94239	H2A histone family, member V	2,99	chr7
H2AFY	9555	H2A histone family, member Y	4,70	chr5
H2AFY2	55506	H2A histone family, member Y2	3,19	chr10
H3F3B	3021	H3 histone, family 3B (H3.3B)	2,65	chr12
HABP4	22927	hyaluronan binding protein 4	2,37	chr9
HAPLN1	1404	Hyaluronan and proteoglycan link protein 1	12,40	chr5
HDAC6	10013	histone deacetylase 6	2,43	chrX
HECA	51696	headcase homolog (Drosophila)	2,85	chr6
HECW2	57520	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 2	2,85	chr2
HEG1	57493	HEG homolog 1 (zebrafish)	4,43	chr3
HEL308	113510	DNA helicase HEL308	2,25	chr4
HES1	3280	hairy and enhancer of split 1, (Drosophila)	5,20	chr3
HES5	388585	hairy and enhancer of split 5 (Drosophila)	3,79	chr1
HEXIM1	10614	hexamethylene bis-acetamide inducible 1	2,00	chr17
HEY1	23462	hairy/enhancer-of-split related with YRPW motif 1	4,70	chr8
HHAT	55733	hedgehog acyltransferase	2,02	chr1
HIC2	23119	hypermethylated in cancer 2	2,01	chr22
HIPK2	28996	Homeodomain interacting protein kinase 2	4,15	chr7
HIST1H2BD	3017	Histone 1, H2bd	2,88	chr6

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Gene Symbol	Entrez Gene	Gene Title	NPC_up	Chromosome Number(Avadis)
HMCN1	83872	hemicentin 1	3,88	chr1
HNRPA0	10949	Heterogeneous nuclear ribonucleoprotein A0	2,32	chr5
HNRPA1	3178	heterogeneous nuclear ribonucleoprotein A1	2,02	chr12
HNRPA3	220988	heterogeneous nuclear ribonucleoprotein A3	2,37	chr2
HNRPC	3183	heterogeneous nuclear ribonucleoprotein C (C1/C2)	2,87	chr14
HNRPD	3184	Heterogeneous nuclear ribonucleoprotein D (AU-rich element RNA binding protein 1, 37	2,64	chr4
HNRPR	10236	heterogeneous nuclear ribonucleoprotein R	3,46	chr1
HNT	50863	neurotrimin	2,01	chr11
HOMER2	9455	Homer homolog 2 (Drosophila)	2,13	chr15
HOMER3	9454	homer homolog 3 (Drosophila)	2,99	chr19
HOXA1	3198	homeo box A1	3,61	chr7
HOXA9	3205	homeo box A9	3,29	chr7
HOXB2	3212	homeo box B2	4,48	chr17
HP1BP3	50809	heterochromatin protein 1, binding protein 3	2,63	chr1
HRB2	11103	HIV-1 rev binding protein 2	2,13	chr12
HRMT1L1	3275	HMT1 hnRNP methyltransferase-like 1 (S. cerevisiae)	2,44	chr21
HS6ST2	90161	heparan sulfate 6-O-sulfotransferase 2	3,89	chrX
HSA277841	55421	ELG protein	2,31	chr17
HSF2	3298	heat shock transcription factor 2	2,95	chr6
HSPA5	3309	heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)	2,49	chr9
HSPA5BP1	54972	heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) binding protein 1	2,91	chr11
HSPC065	29070	HSPC065 protein	2,05	chr16
HTR1E	3354	5-hydroxytryptamine (serotonin) receptor 1E	2,01	chr6
HUNK	30811	hormonally upregulated Neu-associated kinase	2,65	chr21
ID2	3398	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	6,35	chr2
ID2 /// ID2B	3398 /// 84099	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein /// inhibitor of DNA	5,95	chr2
ID3	3399	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	2,55	chr1
ID4	3400	Inhibitor of DNA binding 4, dominant negative helix-loop-helix protein	6,66	chr6
IDH2	3418	isocitrate dehydrogenase 2 (NADP+), mitochondrial	2,16	chr15
IER5L	389792	immediate early response 5-like	7,56	chr9
IFI16	3428	interferon, gamma-inducible protein 16	3,56	chr1
IFNGR1	3459	Interferon gamma receptor 1	2,05	chr6
IGFBP3	3486	insulin-like growth factor binding protein 3	11,27	chr7
IGFBP5	3488	insulin-like growth factor binding protein 5	25,08	chr2
IGFBP7	3490	insulin-like growth factor binding protein 7	8,27	chr4
IGSF11	152404	immunoglobulin superfamily, member 11	2,05	chr3
IGSF4	23705	Immunoglobulin superfamily, member 4	8,38	chr11
IKIP	121457	IKK interacting protein	2,81	chr12
IL11RA	3590	interleukin 11 receptor, alpha	2,53	chr9
IL17D	53342	Interleukin 17D	2,19	chr13
IL1R1	3554	interleukin 1 receptor, type I	2,39	chr2
IL6ST	3572	interleukin 6 signal transducer (gp130, oncostatin M receptor)	2,88	chr17
IMMP1L	196294	IMP1 inner mitochondrial membrane peptidase-like (S. cerevisiae)	2,15	chr11
ING3	54556	inhibitor of growth family, member 3	2,11	chr7
ING4	51147	inhibitor of growth family, member 4	2,29	chr12
INPP1	3628	inositol polyphosphate-1-phosphatase	2,42	chr2
INPP5E	56623	inositol polyphosphate-5-phosphatase, 72 kDa	2,21	chr9
INSM1	3642	insulinoma-associated 1	2,84	chr20
IPO9	55705	Importin 9	2,55	chr1
IPP	3652	intracisternal A particle-promoted polypeptide	2,12	chr1
IQCE	23288	IQ motif containing E	2,16	chr7
IRS4	8471	Insulin receptor substrate 4	7,48	chrX
ISL1	3670	ISL1 transcription factor, LIM/homeodomain, (islet-1)	4,91	chr5
ITGA4	3676	integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	4,20	chr2
ITGAV	3685	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)	6,90	chr2
ITGB8	3696	Integrin, beta 8	2,37	chr7
IVNS1ABP	10625	influenza virus NS1A binding protein	2,06	chr1
JAG1	182	Jagged 1 (Alagille syndrome)	3,09	chr20
JRK	8629	jerky homolog (mouse)	2,16	chr8
JUB	84962	jub, ajuba homolog (Xenopus laevis)	4,72	chr14
KALRN	8997	kalirin, RhoGEF kinase	2,89	chr3
KBTBD11	9920	kelch repeat and BTB (POZ) domain containing 11	2,36	chr8
KBTBD9	114818	kelch repeat and BTB (POZ) domain containing 9	3,93	chr2
KCNJ13	3769	potassium inwardly-rectifying channel, subfamily J, member 13	4,61	chr2
KCNJ2	3759	potassium inwardly-rectifying channel, subfamily J, member 2	2,38	chr17
KCNJ4	3761	potassium inwardly-rectifying channel, subfamily J, member 4	3,63	chr22
KCNK10	54207	potassium channel, subfamily K, member 10	6,54	chr14
KCNT2	343450	potassium channel, subfamily T, member 2	4,19	chr1

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KCTD1	284252	potassium channel tetramerisation domain containing 1	2,13	chr18
KIAA0101	9768	KIAA0101 /// KIAA0101	2,65	chr15
KIAA0247	9766	KIAA0247	2,68	chr14
KIAA0265	23008	KIAA0265 protein	2,79	chr7
KIAA0323	23351	KIAA0323	2,30	chr14
KIAA0500	57237	KIAA0500 protein	3,13	chr14
KIAA0515	84726	KIAA0515	2,11	chr9
KIAA0556	23247	KIAA0556 protein	2,03	chr16
KIAA0582	23177	KIAA0582	2,21	chr2
KIAA0690	23223	KIAA0690	2,10	chr10
KIAA0738	9747	KIAA0738 gene product	2,17	chr7
KIAA0826	23045	KIAA0826	2,05	chr4
KIAA0830	23052	KIAA0830 protein	3,25	chr11
KIAA0841	23354	KIAA0841	3,12	chr19
KIAA0882	23158	KIAA0882 protein	15,64	chr4
KIAA0889	25781	KIAA0889 protein	3,19	chr20
KIAA0895	23366	KIAA0895 protein	2,17	chr7
KIAA0934	22982	KIAA0934	3,36	chr10
KIAA0960	23249	KIAA0960 protein	2,17	chr7
KIAA0992	23022	palladin	8,10	chr4
KIAA1043	23331	KIAA1043 protein	4,72	chr22
KIAA1102	22998	KIAA1102 protein	4,18	chr4
KIAA1128	54462	KIAA1128	2,94	chr10
KIAA1217	56243	KIAA1217	3,05	chr10
KIAA1276	27146	KIAA1276 protein	2,63	chr4
KIAA1434	56261	hypothetical protein KIAA1434	2,54	chr20
KIAA1447	57597	KIAA1447 protein	4,03	chr17
KIAA1524	57650	KIAA1524	2,62	chr3
KIAA1530	57654	KIAA1530 protein	3,20	chr4
KIAA1545	57666	KIAA1545 protein	2,26	chr12
KIAA1546	57667	KIAA1546 protein	3,62	chr4
KIAA1641	57730	KIAA1641	5,13	(vide)
KIAA1704	55425	KIAA1704	2,99	chr13
KIAA1713	80816	KIAA1713	6,29	chr18
KIAA1729	85460	KIAA1729 protein	10,42	chr4
KIAA1772	80000	KIAA1772	7,10	chr18
KIAA1838	84498	KIAA1838	3,14	chr6
KIAA1841	84542	KIAA1841 protein	2,92	chr2
KIAA1856	84629	KIAA1856 protein	2,07	chr7
KIAA1909	153478	KIAA1909 protein	2,27	chr5
KIAA1919	91749	KIAA1919	2,27	chr6
KIAA2022	340533	KIAA2022 protein	2,43	chrX
KIDINS220	57498	Kinase D-interacting substance of 220 kDa	2,05	chr2
KIF3A	11127	kinesin family member 3A	2,04	chr5
KIF5C	3800	Kinesin family member 5C	2,34	chr2
KIFAP3	22920	kinesin-associated protein 3	2,78	chr1
KIRREL	55243	kin of IRRE like (Drosophila)	3,89	chr1
KLF11	8462	Kruppel-like factor 11	2,85	chr2
KLF12	11278	Kruppel-like factor 12	2,12	chr13
KLF3	51274	Kruppel-like factor 3 (basic)	3,38	chr4
KLF6	1316	Kruppel-like factor 6	3,24	chr10
KLHDC5	57542	kelch domain containing 5	2,70	chr12
KLHDC8A	55220	Kelch domain containing 8A	9,89	chr1
KLHL14	57565	kelch-like 14 (Drosophila)	7,04	chr18
KLHL22	84861	kelch-like 22 (Drosophila)	2,78	chr22
KLHL24	54800	kelch-like 24 (Drosophila)	2,13	chr3
KLHL5	51088	Kelch-like 5 (Drosophila)	2,82	chr4
KLHL8	57563	kelch-like 8 (Drosophila)	3,15	chr4
KPNA1	3836	karyopherin alpha 1 (importin alpha 5)	2,19	chr3
KPNB1	3837	Karyopherin (importin) beta 1	2,02	chr17
L3MBTL	26013	l(3)mbt-like (Drosophila)	2,49	chr20
L3MBTL3	84456	l(3)mbt-like 3 (Drosophila)	2,09	chr6
LAMA1	284217	laminin, alpha 1	2,36	chr18
LAMB2	3913	laminin, beta 2 (laminin S)	2,96	chr3
LASS5	91012	LAG1 longevity assurance homolog 5 (S. cerevisiae)	2,08	chr12
LASS6	253782	LAG1 longevity assurance homolog 6 (S. cerevisiae)	2,60	chr2
LDOC1L	84247	leucine zipper, down-regulated in cancer 1-like	2,23	chr22
LEAP-2	116842	liver-expressed antimicrobial peptide 2	2,23	chr5

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LEF1	51176	lymphoid enhancer-binding factor 1	12,44	chr4
LEMD1	93273	LEM domain containing 1	3,95	chr1
LEPR	3953	Leptin receptor	4,22	chr1
LEPROT	54741	leptin receptor overlapping transcript	2,90	chr1
LFNG	3955	lunatic fringe homolog (Drosophila)	2,74	chr7
LGALS8	3964	lectin, galactoside-binding, soluble, 8 (galectin 8)	3,87	chr1
LGI1	9211	leucine-rich, glioma inactivated 1	8,42	chr10
LGR5	8549	leucine-rich repeat-containing G protein-coupled receptor 5	6,45	chr12
LHCGR	3973	Luteinizing hormone/choriogonadotropin receptor	4,91	chr2
LHX2	9355	LIM homeobox 2	135,71	chr9
LHX9	56956	LIM homeobox 9	3,81	chr1
LIX1	167410	Lix1 homolog (mouse)	24,29	chr5
LIX1L	128077	Lix1 homolog (mouse) like	6,85	chr1
LKAP	9665	limkain b1	2,03	chr16
LMO2	4005	LIM domain only 2 (rhombotin-like 1)	2,35	chr11
LMO3	55885	LIM domain only 3 (rhombotin-like 2)	26,62	chr12
LNPEP	4012	leucyl/cystinyl aminopeptidase	2,30	chr5
LOC112476	112476	similar to lymphocyte antigen 6 complex, locus G5B; G5b protein; open reading frame 3	4,16	chr16
LOC113386	113386	similar to envelope protein	2,25	chr19
LOC115648	115648	similar to hypothetical protein FLJ13659	3,51	chr19
LOC115648	48203 /// 28444	similar to hypothetical protein FLJ13659 /// hypothetical protein LOC148203 /// zinc finge	2,01	chr19
LOC132241	132241	hypothetical protein LOC132241	2,86	chr3
LOC143381	143381	hypothetical protein LOC143381	16,72	chr10
LOC144997	144997	hypothetical protein LOC144997	7,95	chr13
LOC145786	145786	hypothetical protein LOC145786	72,07	chr15
LOC147670	147670	hypothetical protein LOC147670	2,25	(vide)
LOC148898	148898	hypothetical protein BC007899	6,09	chr1
LOC150759	150759	hypothetical protein LOC150759	4,35	chr2
LOC151194	151194	similar to hepatocellular carcinoma-associated antigen HCA557b	2,43	chr2
LOC153222	153222	adult retina protein	2,68	chr5
LOC153561	153561	Hypothetical protein LOC153561	4,43	chr5
LOC153682	153682	Hypothetical protein LOC153682	2,28	chr5
LOC158563	158563	hypothetical protein LOC158563	3,15	chrX
LOC200030	00030 /// 40078	hypothetical protein LOC200030 /// hypothetical LOC400781	4,14	chr1
LOC200030	200030	hypothetical protein LOC200030	2,48	chr1
LOC220930	220930	hypothetical protein LOC220930	3,37	chr10
LOC221362	221362	hypothetical protein LOC221362	2,68	chr6
LOC221981	221981	hypothetical protein LOC221981	2,99	chr7
LOC255326	255326	hypothetical protein LOC255326	2,64	chr10
LOC283130	283130	Hypothetical protein LOC283130	4,59	chr11
LOC283464	283464	hypothetical protein LOC283464	2,56	chr12
LOC283481	283481	hypothetical protein LOC283481	2,87	chr13
LOC283508	283508	hypothetical protein LOC283508	3,97	chr13
LOC283677	283677	hypothetical LOC283677	2,56	chr4
LOC284244	284244	hypothetical protein LOC284244	2,93	chr18
LOC284262	284262	hypothetical protein LOC284262	3,78	chr18
LOC284356	284356	hypothetical protein LOC284356	3,97	chr19
LOC284409	284409	hypothetical LOC284409	2,65	chr19
LOC285382	285382	hypothetical gene supported by AK091454	2,98	chr3
LOC285431	285431	hypothetical protein LOC285431	2,27	chr4
LOC285535	285535	hypothetical protein LOC285535	3,18	chr4
LOC285831	285831	hypothetical protein LOC285831	3,15	chr6
LOC285989	285989	hypothetical protein LOC285989	2,26	chr7
LOC286052	286052	hypothetical protein LOC286052	2,19	chr8
LOC286170	286170	hypothetical protein LOC286170	2,11	chr8
LOC286334	286334	Hypothetical protein LOC286334	2,61	chr9
LOC286382	286382	hypothetical protein LOC286382	2,95	chr9
LOC338758	338758	hypothetical protein LOC338758	3,78	chr12
LOC339025	339025	Hypothetical LOC339025	2,12	chr15
LOC339287	339287	hypothetical protein LOC339287	2,25	chr17
LOC340281	340281	hypothetical protein LOC340281	2,55	chr7
LOC346355	46355 /// 39261	similar to RIKEN cDNA A930017N06 gene /// similar to RIKEN cDNA A930017N06 gen	2,25	chr7
LOC347475	347475	hypothetical gene supported by BC017958	2,57	chrX
LOC348094	348094	hypothetical protein LOC348094	2,40	chr15
LOC387758	387758	similar to RIKEN cDNA 1110018M03	6,45	chr11
LOC387790	387790	Hypothetical LOC387790	3,05	chr11
LOC387978	387978	hypothetical gene supported by BX248251	2,08	chr14
LOC388279	388279	Hypothetical gene supported by AF275804	2,54	chr16

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LOC388620	388620	Similar to implantation-associated protein	2,64	chr1
LOC388889	88889 /// 44082	Hypothetical LOC388889 /// Hypothetical protein LOC150271	3,20	chr22
LOC388969	388969	Hypothetical LOC388969	2,57	chr2
LOC389295	389295	Hypothetical protein LOC153561	8,12	chr5
LOC389432	389432	SAM domain containing 1	3,76	chr6
LOC389765	389765	similar to KIF27C	2,91	chr9
LOC390299	390299	Tetraspanin 11	3,03	chr12
LOC390551	90551 /// 44023	similar to hect domain and RLD 2 /// similar to hect domain and RLD 2	2,49	chr15_random
LOC391269	391269	Similar to ankyrin repeat domain 20A	2,23	chr21
LOC391491	391491	Similar to guanidinoacetate methyltransferase; GAMT	2,74	chr2
LOC399763	399763	similar to LINE-1 reverse transcriptase homolog	3,22	chr10
LOC399959	399959	Hypothetical gene supported by BX647608	5,79	chr11
LOC400043	400043	hypothetical gene supported by BC009385	6,24	chr12
LOC400642	400642	hypothetical gene supported by BC041875; BX648984	2,53	chr18
LOC400685	400685	Hypothetical gene supported by BC045806	2,59	chr19
LOC400960	400960	hypothetical gene supported by BC040598	2,23	chr2
LOC401394	01394 /// 40257	hypothetical LOC401394 /// hypothetical LOC402578	3,67	chr7
LOC401528	3 /// 401530 ///	hypothetical gene supported by BC032955 /// hypothetical gene supported by BC032955	5,57	chr9
LOC402485	402485	Hypothetical LOC401328	6,86	chr7
LOC402530	01363 /// 40253	Hypothetical protein FLJ25037 /// Hypothetical LOC441242	2,48	chr11
LOC402560	402560	Hypothetical LOC401384	4,04	chr7
LOC439994	439994	hypothetical gene supported by AF064843; AK025716	2,22	chr2
LOC440135	440135	LOC440135	2,22	chr13
LOC440282	440282	Hypothetical protein LOC145783	3,62	chr15
LOC440460	440460	SH3-domain GRB2-like pseudogene 3	2,03	chr17
LOC440526	440526	LOC440526	2,16	chr19
LOC440934	440934	Hypothetical gene supported by BC008048	7,62	chr2
LOC440944	440944	Hypothetical gene supported by AK128398	2,50	chr3
LOC440995	440995	hypothetical gene supported by BC034933; BC068085	2,09	chr3
LOC440996	440996	Hypothetical gene supported by BC053580	3,68	chr5
LOC441022	441022	similar to RUN and FYVE domain-containing 2; Run- and FYVE-domain containing prote	3,04	chr4
LOC441241	41241 /// 44124	chaperonin containing TCP1, subunit 6A (zeta 1)-like /// chaperonin containing TCP1, su	2,57	chr7
LOC441300	441300	LOC441300	2,83	chr7
LOC441351	441351	Hypothetical gene supported by BX537900	4,46	chr8
LOC441428	441428	Hypothetical gene supported by BX641014	2,38	chr9
LOC492304	492304	putative insulin-like growth factor II associated protein	16,83	chr11
LOC494141	494141	Similar to mitochondrial carrier triple repeat 1	2,36	chr5
LOC56757	56757	hypothetical protein LOC56757	3,05	chr5
LOC641522	641522	ADP-ribosylation factor-like 17 pseudogene 1	2,01	chr17
LOC90110	90110	hypothetical protein LOC90110	2,99	chr17
LOC90693	90693	LOC90693 protein	2,51	chr7
LOC91137	91137	Hypothetical protein BC017169	3,24	chr5
LOC91316	91316	Similar to bK246H3.1 (immunoglobulin lambda-like polypeptide 1, pre-B-cell specific)	7,34	chr5
LOC91461	91461	hypothetical protein BC007901	5,60	chr2
LOC92162	92162	similar to RIKEN cDNA 2600017H02	6,69	chr17
LOC92312	92312	Hypothetical protein LOC92312	2,58	chr1
LOC92691	92691	hypothetical protein BC008604	7,23	chr2
LOC94431	94431	similar to RNA polymerase I transcription factor RRN3	2,77	chr16
LONPL	83752	Peroxisomal LON protease like	4,46	chr16
LOXL1	4016	lysyl oxidase-like 1	2,84	chr15
LOXL2	4017	lysyl oxidase-like 2	3,76	chr8
LPGAT1	9926	Lysophosphatidylglycerol acyltransferase 1	2,33	chr1
LPHN3	23284	latrophilin 3	6,67	chr4
LPIN1	23175	lipin 1	5,55	chr2
LPIN2	9663	lipin 2	2,31	chr18
LPL	4023	lipoprotein lipase	3,81	chr8
LRCH2	57631	leucine-rich repeats and calponin homology (CH) domain containing 2	2,07	chrX
LRCH3	84859	leucine-rich repeats and calponin homology (CH) domain containing 3	3,56	chr3
LRP12	29967	low density lipoprotein-related protein 12	2,62	chr8
LRP2	4036	Low density lipoprotein-related protein 2	21,79	chr2
LRP4	4038	low density lipoprotein receptor-related protein 4	3,17	chr11
LRPAP1	4043	Low density lipoprotein receptor-related protein associated protein 1	3,71	chr4
LRRC17	10234	leucine rich repeat containing 17	5,05	chr7
LRRC3B	116135	leucine rich repeat containing 3B	2,35	chr3
LRRC49	54839	leucine rich repeat containing 49	2,20	chr15
LRRC4C	57689	leucine rich repeat containing 4C	3,58	chr11
LRRN3	54674	leucine rich repeat neuronal 3	6,49	chr7
LSAMP	4045	limbic system-associated membrane protein	2,27	chr3

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LSM8	51691	LSM8 homolog, U6 small nuclear RNA associated (S. cerevisiae)	2,69	chr7
LTBP1	4052	latent transforming growth factor beta binding protein 1	3,84	chr2
LUM	4060	lumican	16,09	chr12
LZIC	84328	Leucine zipper and CTNNBIP1 domain containing	2,15	chr1
LZTFL1	54585	leucine zipper transcription factor-like 1	2,74	chr3
MAB21L1	4081	mab-21-like 1 (C. elegans)	5,33	chr13
MAB21L2	10586	mab-21-like 2 (C. elegans)	11,53	chr4
MAF	4094	v-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)	6,36	chr16
MAGEH1	28986	melanoma antigen family H, 1	2,63	chrX
MAGI3	260425	membrane associated guanylate kinase, WW and PDZ domain containing 3	2,96	chr1
MALAT1	378938	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)	7,76	chr11
MAML2	84441	Mastermind-like 2 (Drosophila)	2,20	chr11
MAML3	55534	Mastermind-like 3 (Drosophila)	2,68	chr4
MAN1A1	4121	Mannosidase, alpha, class 1A, member 1	4,33	chr6
MAN1A2	10905	Mannosidase, alpha, class 1A, member 2	2,49	chr1
MAN2A2	4122	mannosidase, alpha, class 2A, member 2	2,72	chr15
MAP2	4133	Microtubule-associated protein 2	25,86	chr2
MAP2K1IP1	8649	Mitogen-activated protein kinase kinase 1 interacting protein 1	2,40	chr4
MAP3K1	4214	Mitogen-activated protein kinase kinase kinase 1	2,42	chr5
MAP6	4135	microtubule-associated protein 6	4,48	chr11
MAPK10	5602	mitogen-activated protein kinase 10	9,24	chr4
MARCH6	10299	membrane-associated ring finger (C3HC4) 6	2,16	chr5
MARCKS	4082	Myristoylated alanine-rich protein kinase C substrate	2,91	chr6
MASP2	10747	Mannan-binding lectin serine peptidase 2	6,08	chr1
MAST4	23227	microtubule associated serine/threonine kinase family member 4	2,90	chr5
MBD2	8932	methyl-CpG binding domain protein 2	3,34	chr18
MBNL2	10150	Muscleblind-like 2 (Drosophila)	9,49	chr13
MCART6	401612	Mitochondrial carrier triple repeat 6	3,04	chrX
MCF2L	23263	MCF.2 cell line derived transforming sequence-like	3,95	chr13
MDC1	9656	mediator of DNA damage checkpoint 1	2,30	chr6
MDFIC	29969	MyoD family inhibitor domain containing /// MyoD family inhibitor domain containing	3,14	chr7
MDM4	4194	Mdm4, transformed 3T3 cell double minute 4, p53 binding protein (mouse)	2,66	chr1
ME3	10873	malic enzyme 3, NADP(+)-dependent, mitochondrial	8,66	chr11
MECP2	4204	methyl CpG binding protein 2 (Rett syndrome)	2,09	chrX
MED6	10001	mediator of RNA polymerase II transcription, subunit 6 homolog (yeast)	2,15	chr14
MEF2C	4208	MADS box transcription enhancer factor 2, polypeptide C (myocyte enhancer factor 2C)	5,04	chr5
MEIS1	4211	Meis1, myeloid ecotropic viral integration site 1 homolog (mouse)	8,07	chr2
MEIS2	4212	Meis1, myeloid ecotropic viral integration site 1 homolog 2 (mouse)	31,73	chr15
METAP2	10988	Methionyl aminopeptidase 2	2,94	chr12
MGAT3	4248	Mannosyl (beta-1,4-)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase	2,44	chr22
MGC10850	84736	hypothetical protein MGC10850	2,25	chr11
MGC10854	84260	trichoplein	3,82	chr12
MGC12760	84809	hypothetical protein MGC12760 /// hypothetical protein MGC12760	3,31	chr1
MGC13057	84281	Hypothetical protein MGC13057	2,58	chr2
MGC15407	112942	Similar to RIKEN cDNA 4931428D14 gene	2,54	chr2
MGC15875	85007	hypothetical protein MGC15875	2,82	chr5
MGC17839	219902	hypothetical protein MGC17839	2,07	chr11
MGC19764	162394	likely ortholog of mouse schlafen 5	2,22	chr17
MGC21644	153768	Hypothetical protein MGC21644	2,08	chr5
MGC22265	349035	(clone CB1) mRNA fragment /// Hypothetical protein MGC22265	2,37	chr5
MGC24039	160518	hypothetical protein MGC24039	3,90	chr12
MGC25181	257054	hypothetical protein MGC25181	2,26	chr2_random
MGC2752	65996	hypothetical protein MGC2752	2,12	chr19
MGC2803	79002	hypothetical protein MGC2803	2,14	chr19
MGC3032	65998	hypothetical protein MGC3032	2,54	chr11
MGC3121	78994	hypothetical protein MGC3121	2,11	chr16
MGC33212	255758	hypothetical protein MGC33212	2,44	chr3
MGC33302	256471	Hypothetical protein MGC33302	2,33	chr4
MGC33926	130733	hypothetical protein MGC33926	3,27	chr2
MGC35048	124152	hypothetical protein MGC35048	2,96	chr16
MGC35097	200942	hypothetical protein MGC35097	3,06	chr3
MGC35366	144193	hypothetical protein MGC35366	2,52	chr12
MGC39900	286527	hypothetical protein MGC39900	7,63	chrX
MGC40499	245812	hypothetical protein MGC40499	2,01	chr7
MGC4707	79096	MGC4707 protein	2,40	chr11
MGC52110	493753	hypothetical protein MGC52110	2,02	chr2
MGC5509	79074	Hypothetical protein MGC5509	3,05	chr2
MGC5576	79022	hypothetical protein MGC5576	2,35	chr12

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MGEA5	10724	meningioma expressed antigen 5 (hyaluronidase)	3,74	chr10
MID1	4281	Midline 1 (Opitz/BBB syndrome)	2,52	chrX
MITF	4286	microphthalmia-associated transcription factor	6,58	chr3
MKL2	57496	MKL/myocardin-like 2	2,04	chr16
MLL3	58508	myeloid/lymphoid or mixed-lineage leukemia 3	2,24	chr7
MLLT10	8028	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocate	2,59	chr10
MLLT3	4300	Myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocate	2,02	chr9
MLLT4	4301	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocate	4,22	chr6
MLLT6	4302	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocate	2,45	chr17
MLR1	254251	transcription factor MLR1	2,49	chr4
MLR2	84458	ligand-dependent corepressor	2,87	chr10
MMRN1	22915	multimerin 1	2,24	chr4
MN1	4330	meningioma (disrupted in balanced translocation) 1	3,06	chr22
MOBKL2B	79817	MOB1, Mps One Binder kinase activator-like 2B (yeast)	2,08	chr9
MON2	23041	MON2 homolog (yeast)	2,64	chr12
MORC4	79710	MORC family CW-type zinc finger 4	4,44	chrX
MORF4L2	9643	Mortality factor 4 like 2	2,04	chrX
MOXD1	26002	monooxygenase, DBH-like 1	4,91	chr6
MPHOSPH9	10198	M-phase phosphoprotein 9	2,36	chr12
MPZL1	9019	myelin protein zero-like 1	2,71	chr1
MRC2	9902	mannose receptor, C type 2	3,84	chr17
MRPS22	56945	Mitochondrial ribosomal protein S22	2,80	chr3
MRPS6	64968	Mitochondrial ribosomal protein S6	2,84	chr21
MSH5	4439	mutS homolog 5 (E. coli)	2,77	chr6
MSRB2	22921	methionine sulfoxide reductase B2	2,21	chr10
MSRB3	253827	methionine sulfoxide reductase B3	9,04	chr12
MST1	4485	macrophage stimulating 1 (hepatocyte growth factor-like)	2,15	chr1
MSX1	4487	msh homeo box homolog 1 (Drosophila)	7,61	chr4
MSX2	4488	msh homeo box homolog 2 (Drosophila)	3,02	chr5
MTCH2	23788	mitochondrial carrier homolog 2 (C. elegans)	2,17	chr11
MTDH	92140	Metadherin	2,02	chr8
MTERFD2	130916	MTERF domain containing 2	2,25	chr2
MTERFD3	80298	MTERF domain containing 3	2,20	chr12
MUM1L1	139221	melanoma associated antigen (mutated) 1-like 1	3,66	chrX
MUSTN1	389125	musculoskeletal, embryonic nuclear protein 1	2,37	chr3
MXD1	4084	MAX dimerization protein 1	2,79	chr2
MXD4	10608	MAX dimerization protein 4	3,11	chr4
MXI1	4601	MAX interactor 1 /// MAX interactor 1	2,39	chr10
MXRA5	25878	matrix-remodelling associated 5	4,01	chrX
MXRA7	439921	matrix-remodelling associated 7	2,38	chr17
MXRA8	54587	matrix-remodelling associated 8	3,26	chr1_random
MYADM	91663	myeloid-associated differentiation marker	2,11	chr19
MYBL1	4603	v-myb myeloblastosis viral oncogene homolog (avian)-like 1	2,23	chr8
MYEF2	50804	myelin expression factor 2	2,04	chr15
MYLK	4638	myosin, light polypeptide kinase /// myosin, light polypeptide kinase	4,39	chr6
MYST3	7994	MYST histone acetyltransferase (monocytic leukemia) 3	2,94	chr8
NAALAD2	10003	N-acetylated alpha-linked acidic dipeptidase 2	2,66	chr11
NAB1	4664	NGFI-A binding protein 1 (EGR1 binding protein 1)	2,65	chr2
NAB2	4665	NGFI-A binding protein 2 (EGR1 binding protein 2)	2,01	chr12
NAG6	64753	hypothetical protein DKFZp434G156	2,52	chr7
NALP1	22861	NACHT, leucine rich repeat and PYD (pyrin domain) containing 1	5,90	chr17
NAPE-PLD	222236	N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D	2,16	chr7
NASP	4678	Nuclear autoantigenic sperm protein (histone-binding)	2,41	chr1
NAV1	89796	neuron navigator 1	12,31	chr1
NAV3	89795	neuron navigator 3	5,50	chr12
NBEA	26960	neurobeachin	2,44	chr13
NBLA04196	64921	Putative protein product of Nbla04196	2,86	chr7
NBPF8	641559	Neuroblastoma breakpoint family, member 20	4,08	chr1
NCALD	83988	neurocalcin delta /// neurocalcin delta	10,89	chr8
NCAM1	4684	neural cell adhesion molecule 1	13,84	chr11
NCOA5	57727	Nuclear receptor coactivator 5	2,49	chr20
NCOA6	23054	nuclear receptor coactivator 6	2,51	chr20
NCOR1	9611	Nuclear receptor co-repressor 1	2,05	chr17
NDN	4692	necdin homolog (mouse)	2,01	chr15
NDRG1	10397	N-myc downstream regulated gene 1	2,51	chr8
NEBL	10529	nebulette	4,19	chr10
NEDD9	4739	neural precursor cell expressed, developmentally down-regulated 9	12,90	chr6
NEK3	4752	NIMA (never in mitosis gene a)-related kinase 3	2,55	chr13

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NEK9	91754	NIMA (never in mitosis gene a)- related kinase 9	4,50	chr14
NELL2	4753	NEL-like 2 (chicken) /// NEL-like 2 (chicken)	3,91	chr12
NEO1	4756	neogenin homolog 1 (chicken)	2,57	chr15
NEUROD1	4760	neurogenic differentiation 1	2,50	chr2
NEXN	91624	nexilin (F actin binding protein)	2,29	chr1
NFAT5	10725	nuclear factor of activated T-cells 5, tonicity-responsive	2,88	chr16
NFATC1	4772	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1	2,57	chr18
NFATC4	4776	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4	3,45	chr14
NHLH2	4808	nescient helix loop helix 2	2,79	chr1
NHLRC2	374354	NHL repeat containing 2	2,24	chr10
NID1	4811	nidogen 1	3,25	chr1
NID2	22795	nidogen 2 (osteonidogen)	11,71	chr14
NIN	51199	ninein (GSK3B interacting protein)	6,35	chr14
NISCH	11188	nischarin	2,21	chr3
NKTR	4820	natural killer-tumor recognition sequence	2,73	chr3
NLGN1	22871	neuroligin 1	3,38	chr3
NME5	8382	non-metastatic cells 5, protein expressed in (nucleoside-diphosphate kinase)	2,77	chr5
NMT2	9397	N-myristoyltransferase 2	2,22	chr10
NOL7	51406	Nucleolar protein 7, 27kDa	2,36	chr6
NOPE	57722	likely ortholog of mouse neighbor of Punc E11	5,49	chr15
NOTCH1	4851	Notch homolog 1, translocation-associated (Drosophila)	2,73	chr9
NOTCH2	4853	Notch homolog 2 (Drosophila)	2,41	chr1
NOTCH2NL	388677	Notch homolog 2 (Drosophila) N-terminal like	4,78	chr1
NOVA1	4857	neuro-oncological ventral antigen 1	2,89	chr14
NOX4	50507	NADPH oxidase 4	2,72	chr11
NPHP3	27031	nephronophthisis 3 (adolescent)	2,91	chr3
NPR3	4883	natriuretic peptide receptor C/guanylate cyclase C (atrionatriuretic peptide receptor C)	3,70	chr5
NPY2R	4887	neuropeptide Y receptor Y2	3,47	chr4
NR2C2	7182	Nuclear receptor subfamily 2, group C, member 2	2,19	chr3
NR2E1	7101	nuclear receptor subfamily 2, group E, member 1	3,16	chr6
NR2F1	7025	Nuclear receptor subfamily 2, group F, member 1	8,52	chr5
NR2F2	7026	nuclear receptor subfamily 2, group F, member 2	11,84	chr15
NRBP2	340371	nuclear receptor binding protein 2	2,44	chr8
NRCAM	4897	neuronal cell adhesion molecule	8,28	chr7
NRG1	3084	neuregulin 1	10,33	chr8
NRIP1	8204	nuclear receptor interacting protein 1	7,91	chr21
NRIP3	56675	nuclear receptor interacting protein 3	2,04	chr11
NRP1	8829	neuropilin 1	3,18	chr10
NRP2	8828	Neuropilin 2	4,20	chr2
NSUN6	221078	NOL1/NOP2/Sun domain family, member 6	6,89	chr10
NTF3	4908	neurotrophin 3	2,80	chr12
NTRK2	4915	neurotrophic tyrosine kinase, receptor, type 2	2,92	chr9
NUAK1	9891	NUAK family, SNF1-like kinase, 1	3,58	chr12
NUDT5	11164	Nudix (nucleoside diphosphate linked moiety X)-type motif 5	2,43	chr10
NUDT6	11162	nudix (nucleoside diphosphate linked moiety X)-type motif 6	2,77	chr4
NUPL1	9818	Nucleoporin like 1	2,59	chr13
OBSL1	23363	obscurin-like 1	2,53	chr2
ODZ2	57451	odz, odd Oz/ten-m homolog 2 (Drosophila)	5,57	chr5
ODZ4	26011	odz, odd Oz/ten-m homolog 4 (Drosophila)	3,54	chr11
OGT	8473	O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine:polypep	2,02	chrX
OIP106	22906	OGT(O-Glc-NAc transferase)-interacting protein 106 KDa	2,06	chr3
OLFML2A	169611	olfactomedin-like 2A	2,05	chr9
OPN1SW	611	Opsin 1 (cone pigments), short-wave-sensitive (color blindness, tritan)	2,27	chr7
OPN3	23596	opsin 3 (encephalopsin, panopsin)	5,67	chr1
OPTN	10133	optineurin	2,42	chr10
OSBPL5	114879	oxysterol binding protein-like 5	2,79	chr11
OSBPL9	114883	Oxysterol binding protein-like 9	2,60	chr1
OTX2	5015	orthodenticle homolog 2 (Drosophila)	2,24	chr14
OVOS2	144203	ovostatin 2	2,70	chr12
OXR1	55074	oxidation resistance 1	2,28	chr8
P18SRP	285672	p18 splicing regulatory protein	2,20	chr5
PABPN1	8106	poly(A) binding protein, nuclear 1	4,03	chr14
PAFAH1B1	5048	platelet-activating factor acetylhydrolase, isoform Ib, alpha subunit 45kDa	2,08	chr17
PAG1	55824	phosphoprotein associated with glycosphingolipid microdomains 1	13,80	chr8
PAN3	255967	PABP1-dependent poly A-specific ribonuclease subunit PAN3	2,12	chr13
PAPD4	167153	PAP associated domain containing 4	2,34	chr5
PAPOLA	10914	poly(A) polymerase alpha	2,22	chr14
PAPPA	5069	pregnancy-associated plasma protein A, pappalysin 1	3,38	chr9

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PAQR8	85315	progestin and adipoQ receptor family member VIII	2,76	chr6
PARC	23113	p53-associated parkin-like cytoplasmic protein	2,04	chr6
PARD6G	84552	par-6 partitioning defective 6 homolog gamma (C. elegans)	2,10	chr18
PARP6	56965	poly (ADP-ribose) polymerase family, member 6	2,49	chr15
PARVA	55742	parvin, alpha	3,62	chr11
PAWR	5074	PRKC, apoptosis, WT1, regulator	2,01	chr20
PAX3	5077	paired box gene 3 (Waardenburg syndrome 1)	7,02	chr2
PAX6	5080	paired box gene 6 (aniridia, keratitis)	92,78	chr11
PCAF	8850	p300/CBP-associated factor	3,29	chr3
PCBP2	5094	Poly(rC) binding protein 2	2,28	chr12
PCDH17	27253	Protocadherin 17	6,86	chr13
PCDH18	54510	protocadherin 18	2,59	chr4
PCDH9	5101	protocadherin 9	8,49	chr13
PCDHB10	56126	protocadherin beta 10	3,63	chr5
PCDHB14	56122	protocadherin beta 14	2,58	chr5
PCGF3	10336	Polycomb group ring finger 3	2,57	chr4
PCGF4	648	polycomb group ring finger 4	2,51	chr10
PCGF5	84333	polycomb group ring finger 5	2,92	chr10
PCM1	5108	Pericentriolar material 1	2,91	chr8
PCMTD1	115294	Protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 1	3,12	chr8
PCSK5	5125	Proprotein convertase subtilisin/kexin type 5	4,59	chr9
PCTK2	5128	PCTAIRE protein kinase 2	3,18	chr12
PDCD4	27250	programmed cell death 4 (neoplastic transformation inhibitor)	2,77	chr10
PDE7A	5150	phosphodiesterase 7A	2,00	chr8
PDGFC	56034	platelet derived growth factor C	7,92	chr4
PDGFRB	5159	platelet-derived growth factor receptor, beta polypeptide	2,36	chr5
PDZRN3	23024	PDZ domain containing RING finger 3	3,06	chr3
PEG10	23089	paternally expressed 10	2,75	chr7
PFAAP5	10443	Hypothetical gene CG012	4,32	chr13
PGAP1	80055	GPI deacylase	6,04	chr2
PGM5	5239	phosphoglucomutase 5	3,61	chr9
PHC2	1912	polyhomeotic-like 2 (Drosophila)	11,78	chr1
PHF10	55274	PHD finger protein 10	2,31	chr6
PHF2	5253	PHD finger protein 2	2,74	chr9
PHF20L1	51105	PHD finger protein 20-like 1	2,35	chr8
PHF21B	112885	PHD finger protein 21B	2,15	chr22
PHTF1	10745	putative homeodomain transcription factor 1	2,09	chr1
PIAS1	8554	protein inhibitor of activated STAT, 1	2,92	chr15
PIK3C2A	5286	Phosphoinositide-3-kinase, class 2, alpha polypeptide	2,80	chr11
PIK3C3	5289	Phosphoinositide-3-kinase, class 3	2,58	chr18
PIK3R1	5295	phosphoinositide-3-kinase, regulatory subunit 1 (p85 alpha)	3,61	chr5
PIK3R3	8503	phosphoinositide-3-kinase, regulatory subunit 3 (p55, gamma)	3,93	chr1
PIK4CA	5297	phosphatidylinositol 4-kinase, catalytic, alpha polypeptide	2,09	chr22
PIK4CA	220686 /// 5297	phosphatidylinositol 4-kinase, catalytic, alpha polypeptide /// hypothetical protein LOC22	2,84	chr22
PILRB	29990	paired immunoglobin-like type 2 receptor beta	2,31	chr7
PITPNA	5306	phosphatidylinositol transfer protein, alpha	2,52	chr17
PITPNB	23760	Phosphatidylinositol transfer protein, beta	2,04	chr22
PKIA	5569	Protein kinase (cAMP-dependent, catalytic) inhibitor alpha	3,14	chr8
PKNOX2	63876	PBX/knotted 1 homeobox 2	5,62	chr11
PKP4	8502	Plakophilin 4	2,36	chr2
PLAGL1	5325	pleiomorphic adenoma gene-like 1	5,59	chr6
PLAT	5327	plasminogen activator, tissue	3,10	chr8
PLCB1	23236	phospholipase C, beta 1 (phosphoinositide-specific)	2,44	chr20
PLCE1	51196	phospholipase C, epsilon 1	2,01	chr10
PLCL3	23007	phospholipase C-like 3	2,01	chr3
PLEKHA1	59338	pleckstrin homology domain containing, family A (phosphoinositide binding specific) mer	2,26	chr10
PLEKHA5	54477	Pleckstrin homology domain containing, family A member 5	2,21	chr12
PLEKHG1	57480	pleckstrin homology domain containing, family G (with RhoGef domain) member 1	9,86	chr6
PLK1	5347	Polo-like kinase 1 (Drosophila)	3,42	chr16
PLXNA1	5361	plexin A1	2,39	chr3
PLXNA2	5362	plexin A2	3,82	chr1
PLXNB2	23654	plexin B2	2,42	chr22
PLXNC1	10154	plexin C1	3,11	chr12
PMP22	5376	peripheral myelin protein 22	7,19	chr17
PMS2L1	5379 /// 5383	postmeiotic segregation increased 2-like 1 /// postmeiotic segregation increased 2-like 5	2,13	chr7
POFUT2	23275	protein O-fucosyltransferase 2	2,18	chr21
POLR2J2	246721	DNA directed RNA polymerase II polypeptide J-related gene	2,34	chr7
POMT1	10585	protein-O-mannosyltransferase 1	2,28	chr9

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PON2	5445	Paraoxonase 2	2,12	chr7
POSTN	10631	periostin, osteoblast specific factor	45,10	chr13
POU3F2	5454	POU domain, class 3, transcription factor 2	3,76	chr6
POU4F1	5457	POU domain, class 4, transcription factor 1	3,70	chr13
PPFIBP1	440091 /// 8496	PTPRF interacting protein, binding protein 1 (liprin beta 1) /// similar to PTPRF interactin	3,77	chr12
PPM1F	9647	protein phosphatase 1F (PP2C domain containing)	2,46	chr22
PPM1L	151742	Protein phosphatase 1 (formerly 2C)-like	2,71	chr3
PPOX	5498	protoporphyrinogen oxidase	3,33	chr1
PPP2R5C	5527	protein phosphatase 2, regulatory subunit B (B56), gamma isoform	2,17	chr14
PPP3CA	5530	Protein phosphatase 3 (formerly 2B), catalytic subunit, alpha isoform (calcineurin A alph	2,06	chr4
PPT2 /// EGFL8	80864 /// 9374	palmitoyl-protein thioesterase 2 /// EGF-like-domain, multiple 8	3,63	chr6
PRDM16	63976	PR domain containing 16	6,13	chr1
PREX1	57580	phosphatidylinositol 3,4,5-trisphosphate-dependent RAC exchanger 1	2,79	chr20
PRKAA2	5563	Protein kinase, AMP-activated, alpha 2 catalytic subunit	2,74	chr1
PRKD1	5587	protein kinase D1	2,52	chr14
PRKRA	8575	protein kinase, interferon-inducible double stranded RNA dependent activator	2,22	chr2
PRO2852	114224	hypothetical protein PRO2852	2,03	chr9
PROS1	5627	protein S (alpha)	5,53	chr3
PRPF40A	55660	PRP40 pre-mRNA processing factor 40 homolog A (yeast)	2,56	chr2
PRR3	80742	proline rich 3	2,05	chr6
PRRX1	5396	paired related homeobox 1	5,41	chr1
PRSS23	11098	protease, serine, 23	36,19	chr11
PRTG	283659	Protogenin homolog (Gallus gallus)	38,57	chr15
PSCD2	9266	Pleckstrin homology, Sec7 and coiled-coil domains 2 (cytohesin-2)	2,30	chr19
PSD3	23362	pleckstrin and Sec7 domain containing 3	2,42	chr8
PSEN1	5663	Presenilin 1 (Alzheimer disease 3)	2,50	chr14
PSMB7	5695	Proteasome (prosome, macropain) subunit, beta type, 7	2,13	chr9
PSME4	23198	Proteasome (prosome, macropain) activator subunit 4	2,16	chr2
PTBP2	58155	Polypyrimidine tract binding protein 2	2,41	chr1
PTEN	5728	Phosphatase and tensin homolog (mutated in multiple advanced cancers 1)	2,23	chr10
PTK2	5747	PTK2 protein tyrosine kinase 2	2,47	chr8
PTN	5764	pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1)	3,49	chr7
PTPN13	5783	Protein tyrosine phosphatase, non-receptor type 13 (APO-1/CD95 (Fas)-associated pho	2,57	chr4
PTPN21	11099	Protein tyrosine phosphatase, non-receptor type 21	2,75	chr14
PTPN5	84867	protein tyrosine phosphatase, non-receptor type 5 (striatum-enriched)	3,51	chr11
PTPRD	5789	Protein tyrosine phosphatase, receptor type, D	4,30	chr9
PTPRG	5793	Protein tyrosine phosphatase, receptor type, G	2,25	chr3
PTPRJ	5795	Protein tyrosine phosphatase, receptor type, J	3,32	chr11
PTPRM	5797	protein tyrosine phosphatase, receptor type, M	4,86	chr7
PTX3	5806	pentraxin-related gene, rapidly induced by IL-1 beta	5,15	chr3
PUM2	23369	Pumilio homolog 2 (Drosophila)	3,87	chr2
PUNC	9543	putative neuronal cell adhesion molecule	4,01	chr15
PURB	5814	purine-rich element binding protein B	2,23	chr7
PURG	29942	purine-rich element binding protein G	4,14	chr8
PVRL3	25945	Poliovirus receptor-related 3	2,81	chr3
PXMP3	5828	Peroxisomal membrane protein 3, 35kDa (Zellweger syndrome)	2,02	chr8
QKI	9444	quaking homolog, KH domain RNA binding (mouse)	2,74	chr6
RAB22A	57403	RAB22A, member RAS oncogene family	2,15	chr20
RAB27B	5874	RAB27B, member RAS oncogene family	3,53	chr18
RAB30	27314	RAB30, member RAS oncogene family	2,10	chr11
RAB31	11031	RAB31, member RAS oncogene family	2,18	chr18
RAB40B	10966	RAB40B, member RAS oncogene family	3,04	chr17
RAB6B	51560	RAB6B, member RAS oncogene family	2,51	chr3
RAB6IP1	23258	RAB6 interacting protein 1	2,27	chr11
RABGAP1	23637	RAB GTPase activating protein 1	2,73	chr9
RABL2B	11158 /// 11159	RAB, member of RAS oncogene family-like 2B /// RAB, member of RAS oncogene fami	2,34	chr2
RAF1	5894	V-raf-1 murine leukemia viral oncogene homolog 1	2,34	chr3
RAI1	10743	retinoic acid induced 1	4,81	chr17
RAI17	57178	retinoic acid induced 17	2,34	chr10
RALGDS	5900	ral guanine nucleotide dissociation stimulator	2,97	chr9
RANBP2L2	440872	Ran binding protein 2-like 2	2,63	chr2
RAP140	23272	retinoblastoma-associated protein 140	2,22	chr3
RARB	5915	retinoic acid receptor, beta	2,60	chr3
RASA2	5922	RAS p21 protein activator 2	2,88	chr3
RASA4	10156 /// 40133	RAS p21 protein activator 4 /// hypothetical protein FLJ21767	2,08	chr7
RASGRP1	10125	RAS guanyl releasing protein 1 (calcium and DAG-regulated)	3,62	chr15
RASSF3	283349	Ras association (RalGDS/AF-6) domain family 3	2,25	chr14
RBBP6	5930	retinoblastoma binding protein 6	2,47	chr16

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Gene Symbol	Entrez Gene	Gene Title	NPC_up	Chromosome Number(Avadis)
RBM24	221662	RNA binding motif protein 24	8,43	chr6
RBM25	58517	RNA binding motif protein 25	2,10	chr14
RBM33	155435	RNA binding motif protein 33	2,38	chr7
RBM4B	83759	RNA binding motif protein 4B	2,49	chr11
RBM5	10181	RNA binding motif protein 5	2,63	chr3
RBM6	10180	RNA binding motif protein 6	3,28	chr3
RBMS1	5937	RNA binding motif, single stranded interacting protein 1	2,61	chr2
RBMS3	27303	RNA binding motif, single stranded interacting protein	2,50	chr3
RCBTB2	1102	regulator of chromosome condensation (RCC1) and BTB (POZ) domain containing prot	2,95	chr13
RCN1	5954	reticulocalbin 1, EF-hand calcium binding domain	2,29	chr11
RCOR3	55758	REST corepressor 3	2,47	chr1
RELN	5649	reelin	15,67	chr7
RERE	473	Arginine-glutamic acid dipeptide (RE) repeats	2,11	chr1
REV3L	5980	REV3-like, catalytic subunit of DNA polymerase zeta (yeast)	5,11	chr6
RFC3	5983	Replication factor C (activator 1) 3, 38kDa	2,37	chr13
RFX3	5991	Regulatory factor X, 3 (influences HLA class II expression)	2,83	chr9
RGL1	23179	ral guanine nucleotide dissociation stimulator-like 1	7,87	chr1
RGS12	6002	regulator of G-protein signalling 12	2,04	chr4
RGS20	8601	regulator of G-protein signalling 20	2,60	chr8
RGS3	5998	regulator of G-protein signalling 3	2,24	chr9
RGS4	5999	regulator of G-protein signalling 4	8,95	chr1
RHOBTB1	9886	Rho-related BTB domain containing 1	2,75	chr10
RHOBTB3	22836	Rho-related BTB domain containing 3	6,84	chr5
RHOU	58480	ras homolog gene family, member U	6,94	chr1
RIN2	54453	Ras and Rab interactor 2	6,62	chr20
RIPX	22902	rap2 interacting protein x	5,22	chr4
RIT1	6016	Ras-like without CAAX 1	2,44	chr1
RNF103	7844	ring finger protein 103	2,85	chr2
RNF130	55819	Ring finger protein 130	3,33	chr5
RNF144	9781	ring finger protein 144	2,53	chr2
RNF165	494470	ring finger protein 165	9,91	chr18
RNF175	285533	ring finger protein 175	3,51	chr4
RNF19	25897	Ring finger protein 19	2,02	chr8
ROBO1	6091	Roundabout, axon guidance receptor, homolog 1 (Drosophila)	2,78	chr3
ROBO2	6092	roundabout, axon guidance receptor, homolog 2 (Drosophila)	3,59	chr3
ROCK2	9475	Rho-associated, coiled-coil containing protein kinase 2	2,12	chr2
ROR2	4920	receptor tyrosine kinase-like orphan receptor 2	2,65	chr9
RP11-343N15.3	440608	Similar to Formin binding protein 2 (srGAP2)	2,87	chr1
RP3-473B4.1	159091	Hypothetical protein BC017868	2,80	chrX
RPL28	6158	ribosomal protein L28	2,02	chr19
RPL31	6160	ribosomal protein L31	3,69	chr2
RPRC1	55700	arginine/proline rich coiled-coil 1	3,64	chr1
RPS15A	6210	Ribosomal protein S15a	2,67	chr16
RPS23	6228	ribosomal protein S23	3,13	chr5
RPS29	6235	Ribosomal protein S29	2,38	chr14
RPS6KA3	6197	ribosomal protein S6 kinase, 90kDa, polypeptide 3	3,80	chrX
RPS6KA5	9252	ribosomal protein S6 kinase, 90kDa, polypeptide 5	2,11	chr14
RRN3	54700	RRN3 RNA polymerase I transcription factor homolog (yeast)	2,13	chr16
RSBN1	54665	round spermatid basic protein 1	2,23	chr1
RSL1D1	26156	Ribosomal L1 domain containing 1	4,33	chr16
RSNL2	79745	restin-like 2	4,55	chr2
RSPO3	84870	R-spondin 3 homolog (Xenopus laevis)	5,79	chr6
RTN1	6252	reticulon 1	6,98	chr14
RUNX1	861	runt-related transcription factor 1 (acute myeloid leukemia 1; aml1 oncogene)	2,59	chr21
RUTBC1	9905	RUN and TBC1 domain containing 1	2,40	chr17
SAPS2	9701	SAPS domain family, member 2	2,14	chr22
SBF2	81846	SET binding factor 2	2,11	chr11
SBLF	11037	stoned B-like factor	3,81	chr2
SCC-112	23244	SCC-112 protein	2,34	chr4
SCD5	79966	stearoyl-CoA desaturase 5	18,32	chr4
SCFD1	23256	Sec1 family domain containing 1	2,07	chr14
SCHIP1	29970	schwannomin interacting protein 1	2,20	chr3
SCMH1	22955	sex comb on midleg homolog 1 (Drosophila)	2,04	chr1
SCML1	6322	sex comb on midleg-like 1 (Drosophila)	3,10	chrX
SCRG1	11341	scrapie responsive protein 1	3,50	chr4
SCUBE2	57758	signal peptide, CUB domain, EGF-like 2	2,88	chr11
SCUBE3	222663	signal peptide, CUB domain, EGF-like 3	14,58	chr6
SDC1	6382	syndecan 1	2,08	chr2

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SDC2	6383	syndecan 2 (heparan sulfate proteoglycan 1, cell surface-associated, fibroglycan)	4,54	chr8
SDCCAG33	10194	serologically defined colon cancer antigen 33	4,76	chr18
SDHAL2	255812	succinate dehydrogenase complex, subunit A, flavoprotein-like 2	3,76	chr3
SDK1	221935	sidekick homolog 1 (chicken)	2,89	chr7
SDK2	54549	sidekick homolog 2 (chicken)	13,25	chr17
SEC15L1	54536	SEC15-like 1 (S. cerevisiae)	2,41	chr10
SEC6L1	11336	SEC6-like 1 (S. cerevisiae)	2,53	chr5
SELENBP1	8991	selenium binding protein 1 /// selenium binding protein 1	2,12	chr1
SEMA3A	10371	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin)	2,56	chr7
SEMA3C	10512	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin)	8,75	chr7
SEMA3F	6405	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin)	2,29	chr3
SEMA4F	10505	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cyto	2,34	chr2
SEMA5A	9037	sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane	8,08	chr5
SEMA6D	80031	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D	4,35	chr15
SENP6	26054	SUMO1/sentrin specific peptidase 6	2,82	chr6
SENP7	57337	SUMO1/sentrin specific peptidase 7	2,13	chr3
SERTAD2	9792	SERTA domain containing 2	4,46	chr2
SERTAD4	56256	SERTA domain containing 4	2,68	chr1
SESN3	143686	Sestrin 3	5,17	chr11
SESTD1	91404	SEC14 and spectrin domains 1	3,24	chr2
SET7	80854	SET domain-containing protein 7	3,94	chr4
SETBP1	26040	SET binding protein 1	3,15	chr18
SETD5	55209	SET domain containing 5	2,25	chr3
SETD6	79918	SET domain containing 6	2,02	chr16
SEZ6L	23544	Seizure related 6 homolog (mouse)-like	3,21	chr22
SFI1	9814	Sfi1 homolog, spindle assembly associated (yeast)	2,49	chr22
SFPQ	6421	Splicing factor proline/glutamine-rich (polypyrimidine tract binding protein associated)	3,94	chr1
SFRP2	6423	secreted frizzled-related protein 2	5,36	chr4
SFRS1	6426	Splicing factor, arginine/serine-rich 1 (splicing factor 2, alternate splicing factor)	2,65	chr17
SFRS11	9295	splicing factor, arginine/serine-rich 11	4,06	chr1
SFRS14	10147	Splicing factor, arginine/serine-rich 14	2,20	chr19
SFRS2IP	9169	Splicing factor, arginine/serine-rich 2, interacting protein	3,45	chr12
SFRS4	6429	Splicing factor, arginine/serine-rich 4	2,26	chr1
SFXN1	94081	sideroflexin 1	2,14	chr5
SGSH	6448	N-sulfoglucosamine sulfohydrolase (sulfamidase)	2,36	chr17
SH3BGRL2	83699	SH3 domain binding glutamic acid-rich protein like 2	2,84	chr6
SH3MD1	9644	SH3 multiple domains 1	2,26	chr10
SHANK3	85358	SH3 and multiple ankyrin repeat domains 3	2,51	chr22
SHC2	25759	SHC (Src homology 2 domain containing) transforming protein 2	2,99	chr19
SHRM	57619	Shroom	2,20	chr4
SIDT2	51092	SID1 transmembrane family, member 2	2,52	chr11
SILV	6490	silver homolog (mouse)	3,28	chr12
SIPA1L2	57568	signal-induced proliferation-associated 1 like 2	3,19	chr1
SIX3	6496	Sine oculis homeobox homolog 3 (Drosophila)	37,88	chr2
SIX6	4990	sine oculis homeobox homolog 6 (Drosophila)	6,24	chr14
SLC16A14	151473	solute carrier family 16 (monocarboxylic acid transporters), member 14	3,79	chr2
SLC16A4	9122	Solute carrier family 16 (monocarboxylic acid transporters), member 4	2,35	chr1
SLC1A2	6506	solute carrier family 1 (glial high affinity glutamate transporter), member 2	3,01	chr11
SLC1A3	6507	solute carrier family 1 (glial high affinity glutamate transporter), member 3	3,22	chr5
SLC1A4	6509	solute carrier family 1 (glutamate/neutral amino acid transporter), member 4	2,27	chr2
SLC25A16	8034	Solute carrier family 25 (mitochondrial carrier; Graves disease autoantigen), member 16	2,37	chr10
SLC25A27	9481	solute carrier family 25, member 27	4,25	chr6
SLC25A37	51312	solute carrier family 25, member 37	3,10	chr8
SLC26A2	1836	solute carrier family 26 (sulfate transporter), member 2	2,29	chr5
SLC30A1	7779	Solute carrier family 30 (zinc transporter), member 1	2,12	chr1
SLC35D1	23169	solute carrier family 35 (UDP-glucuronic acid/UDP-N-acetylgalactosamine dual transpor	2,31	chr1
SLC35E2	9906	solute carrier family 35, member E2	3,24	chr1
SLC35F1	222553	solute carrier family 35, member F1	2,10	chr6
SLC39A10	57181	Solute carrier family 39 (zinc transporter), member 10	2,98	chr2
SLC4A7	9497	solute carrier family 4, sodium bicarbonate cotransporter, member 7	2,04	chr3
SLC5A3	6526	solute carrier family 5 (inositol transporters), member 3	4,29	chr21
SLC6A16	28968	Solute carrier family 6, member 16	7,77	chr19
SLC7A6	9057	solute carrier family 7 (cationic amino acid transporter, y+ system), member 6	2,31	chr16
SLC8A1	6546	solute carrier family 8 (sodium/calcium exchanger), member 1	2,12	chr2
SLC9A3	6550	Solute carrier family 9 (sodium/hydrogen exchanger), member 3	2,28	chr5
SLIT2	9353	slit homolog 2 (Drosophila)	7,63	chr4
SLITRK4	139065	SLIT and NTRK-like family, member 4	2,70	chrX
SLITRK5	26050	SLIT and NTRK-like family, member 5	3,43	chr13

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SLITRK6	84189	SLIT and NTRK-like family, member 6	6,19	chr13
SLN	6588	sarcolipin	4,50	chr11
SMAD3	4088	SMAD, mothers against DPP homolog 3 (Drosophila)	3,50	chr15
SMAD5	4090	SMAD, mothers against DPP homolog 5 (Drosophila)	2,22	chr5
SMARCC1	6599	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily	3,05	chr3
SMARCD3	6604	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily	2,58	chr7
SMARCE1	6605	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily	2,05	chr17
SMBP	56889	SM-11044 binding protein	2,38	chr10
SMPDL3A	10924	sphingomyelin phosphodiesterase, acid-like 3A	2,24	chr6
SMU1	55234	Smu-1 suppressor of mec-8 and unc-52 homolog (C. elegans)	2,41	chr9
SNAI2	6591	snail homolog 2 (Drosophila)	9,44	chr8
SNCA	6622	synuclein, alpha (non A4 component of amyloid precursor) /// synuclein, alpha (non A4 c	2,70	chr4
SNF1LK	150094	SNF1-like kinase /// SNF1-like kinase	2,56	chr10
SNF8	11267	SNF8, ESCRT-II complex subunit, homolog (S. cerevisiae)	2,33	chr17
SNRPA1	6627	Small nuclear ribonucleoprotein polypeptide A'	2,47	chr15
SNX1	6642	sorting nexin 1	2,14	chr15
SOCS3	9021	suppressor of cytokine signaling 3	2,60	chr17
SORBS2	8470	sorbin and SH3 domain containing 2	2,69	chr4
SORCS1	114815	sortilin-related VPS10 domain containing receptor 1	3,02	chr10
SORCS2	57537	sortilin-related VPS10 domain containing receptor 2	3,39	chr4
SOSTDC1	25928	sclerostin domain containing 1	2,01	chr7
SOX1	6656	SRY (sex determining region Y)-box 1	8,01	chr13
SOX10	6663	SRY (sex determining region Y)-box 10	2,90	chr22
SOX11	6664	SRY (sex determining region Y)-box 11	8,85	chr2
SOX3	6658	SRY (sex determining region Y)-box 3	3,38	chrX
SOX5	6660	SRY (sex determining region Y)-box 5	28,58	chr12
SOX6	55553	SRY (sex determining region Y)-box 6	7,05	chr11
SOX9	6662	SRY (sex determining region Y)-box 9 (campomelic dysplasia, autosomal sex-reversal)	5,01	chr17
SP8	221833	Sp8 transcription factor	16,95	chr7
SPA17	53340	sperm autoantigenic protein 17	3,09	chr11
SPAG9	9043	sperm associated antigen 9	2,23	chr17
SPARC	6678	secreted protein, acidic, cysteine-rich (osteonectin) /// secreted protein, acidic, cysteine-	2,25	chr16
SPHK1	8877	sphingosine kinase 1	6,46	chr17
SPOCK	6695	sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican)	4,73	chr5
SPON1	10418	spondin 1, extracellular matrix protein	9,34	chr11
SPPL3	121665	signal peptide peptidase 3	2,02	chr12
SPSB4	92369	splA/ryanodine receptor domain and SOCS box containing 4	2,16	chr3
SPTBN1	6711	Spectrin, beta, non-erythrocytic 1	2,29	chr2
SREBF1	6720	Sterol regulatory element binding transcription factor 1	2,06	chr17
SRGAP2	23380	SLIT-ROBO Rho GTPase activating protein 2	3,08	chr1
SRGAP3	9901	SLIT-ROBO Rho GTPase activating protein 3	6,11	chr3
SRP54	6729	Signal recognition particle 54kDa	2,10	chr14
SRR	63826	serine racemase	4,61	chr17
SSBP2	23635	Single-stranded DNA binding protein 2	7,89	chr5
SSFA2	6744	sperm specific antigen 2	4,38	chr2
SSH1	54434	slingshot homolog 1 (Drosophila)	2,21	chr12
SSPO	23145	SCO-spondin homolog (Bos taurus)	2,06	chr7
SSR1	6745	Signal sequence receptor, alpha (translocon-associated protein alpha)	3,14	chr6
SST	6750	somatostatin	5,09	chr3
ST3GAL3	6487	ST3 beta-galactoside alpha-2,3-sialyltransferase 3	2,35	chr1
ST3GAL5	8869	ST3 beta-galactoside alpha-2,3-sialyltransferase 5	2,13	chr2
ST5	6764	suppression of tumorigenicity 5	2,17	chr11
ST6GALNAC5	81849	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha	8,46	chr1
ST7L	54879	Suppression of tumorigenicity 7 like	7,03	chr1
ST8SIA2	8128	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 2	7,30	(vide)
STK17A	9263	Serine/threonine kinase 17a (apoptosis-inducing)	2,04	chr7
STMN2	11075	stathmin-like 2	12,77	chr8
STMN4	81551	stathmin-like 4 /// stathmin-like 4	3,21	chr8
STOX1	219736	storkhead box 1	2,04	chr10
STT3B	201595	STT3, subunit of the oligosaccharyltransferase complex, homolog B (S. cerevisiae)	2,12	chr3
STX12	23673	syntaxin 12	2,42	chr1
STX7	8417	Syntaxin 7	2,33	chr6
SULF1	23213	sulfatase 1	20,55	chr8
SUPT7L	9913	suppressor of Ty 7 (S. cerevisiae)-like	2,06	chr2
SUV420H1	51111	Suppressor of variegation 4-20 homolog 1 (Drosophila)	2,41	chr11
SVIL	6840	supervillin	2,59	chr10
SYNE1	23345	spectrin repeat containing, nuclear envelope 1	2,07	chr6
SYT11	23208	synaptotagmin XI	3,88	chr1

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SYT17	51760	Synaptotagmin XVII	3,76	chr16
SYTL2	54843	synaptotagmin-like 2	5,56	chr11
TAF15	8148	TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 68kDa	2,84	chr17
TAGLN3	29114	transgelin 3	3,36	chr3
TAIP-2	80034	TGF-beta induced apotosis protein 2	2,28	chr2
TANC	85461	TPR domain, ankyrin-repeat and coiled-coil-containing	2,91	chr2
TARDBP	23435	TAR DNA binding protein /// TAR DNA binding protein	2,19	chr1
TBC1D12	23232	TBC1 domain family, member 12	2,51	chr10
TBC1D3	14060 /// 8421	TBC1 domain family, member 3 /// TBC1 domain family, member 3C	6,00	chr17_random
TBC1D8	11138	TBC1 domain family, member 8 (with GRAM domain)	2,20	chr2
TBL1X	6907	transducin (beta)-like 1X-linked	2,71	chrX
TBRG1	84897	transforming growth factor beta regulator 1	2,48	chr11
TCF12	6938	Transcription factor 12 (HTF4, helix-loop-helix transcription factors 4)	2,55	chr15
TCF8	6935	transcription factor 8 (represses interleukin 2 expression)	6,03	chr10
TDRD7	23424	tudor domain containing 7	3,05	chr9
TEAD1	7003	TEA domain family member 1 (SV40 transcriptional enhancer factor)	2,63	chr11
TERF2	7014	telomeric repeat binding factor 2	2,26	chr16
TEX10	54881	Testis expressed sequence 10	2,17	chr9
TFAP2A	7020	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)	20,12	chr6
TFAP2B	7021	transcription factor AP-2 beta (activating enhancer binding protein 2 beta)	13,06	chr6
TFDP2	7029	Transcription factor Dp-2 (E2F dimerization partner 2)	2,21	chr3
TFPI	7035	tissue factor pathway inhibitor (lipoprotein-associated coagulation inhibitor)	4,00	chr2
TGFB2	7042	Transforming growth factor, beta 2	2,81	chr1
TGFBI	7045	transforming growth factor, beta-induced, 68kDa	7,02	chr5
TGFBR1	7046	Transforming growth factor, beta receptor I (activin A receptor type II-like kinase, 53kDa	2,88	chr9
TGFBR3	7049	transforming growth factor, beta receptor III (betaglycan, 300kDa)	5,34	chr1
THBS3	7059	thrombospondin 3	4,71	chr1
THRAP2	23389	Thyroid hormone receptor associated protein 2	2,79	chr12
THSD1	374500 /// 5590	thrombospondin, type I, domain containing 1 /// thrombospondin, type I, domain containi	3,05	chr13
TIA1	7072	TIA1 cytotoxic granule-associated RNA binding protein	2,69	chr2
TIAM1	7074	T-cell lymphoma invasion and metastasis 1	3,51	chr21
TIFA	92610	TRAF-interacting protein with a forkhead-associated domain	2,81	chr4
TIGA1	114915	TIGA1	2,74	chr5
TIMP2	7077	TIMP metallopeptidase inhibitor 2	2,40	chr17
TIMP3	7078	TIMP metallopeptidase inhibitor 3 (Sorsby fundus dystrophy, pseudoinflammatory)	6,97	chr22
TIPRL	261726	TIP41, TOR signalling pathway regulator-like (S. cerevisiae)	2,24	chr1
TK2	7084	thymidine kinase 2, mitochondrial	2,16	chr16
TLE4	7091	transducin-like enhancer of split 4 (E(sp1) homolog, Drosophila)	4,03	chr9
TM2D1	83941	TM2 domain containing 1	2,09	chr1
TMCC1	23023	transmembrane and coiled-coil domain family 1	2,08	chr3
TMCC3	57458	Transmembrane and coiled-coil domain family 3	2,53	chr12
TMED4	222068	transmembrane emp24 protein transport domain containing 4	2,59	chr7
TMEFF2	23671	transmembrane protein with EGF-like and two follistatin-like domains 2	9,12	chr2
TMEM118	84900	Transmembrane protein 118	3,17	chr12
TMEM2	23670	transmembrane protein 2	2,97	chr9
TMEM20	159371	transmembrane protein 20	2,31	chr10
TMEM29	29057	transmembrane protein 29	2,03	chrX
TMEM46	387914	transmembrane protein 46	4,82	chr13
TMEM5	10329	transmembrane protein 5	2,67	chr12
TMEM50B	757	transmembrane protein 50B	2,01	chr21
TMEM76	138050	transmembrane protein 76	4,68	chr8
TMSL8	11013	thymosin-like 8	2,67	chrX
TMTC2	160335	Transmembrane and tetratricopeptide repeat containing 2	2,11	chr12
TNC	3371	tenascin C (hexabrachion)	6,97	chr9
TncRNA	283131	trophoblast-derived noncoding RNA	4,46	chr11
TNFAIP1	7126	tumor necrosis factor, alpha-induced protein 1 (endothelial)	3,35	chr17
TNFAIP3	7128	tumor necrosis factor, alpha-induced protein 3	3,65	chr6
TNFRSF19	55504	tumor necrosis factor receptor superfamily, member 19	8,90	chr9
TNS1	7145	tensin 1 /// tensin 1	3,69	chr2
TP53INP1	94241	tumor protein p53 inducible nuclear protein 1	3,60	chr8
TPBG	7162	trophoblast glycoprotein	6,71	chr6
TPM1	7168	Tropomyosin 1 (alpha)	11,80	chr15
TRA2A	29896	Transformer-2 alpha	4,88	chr7
TRAM2	9697	translocation associated membrane protein 2	2,05	chr6
TRIB2	28951	tribbles homolog 2 (Drosophila)	2,63	chr2
TRIM44	54765	tripartite motif-containing 44	2,44	chr11
TRIM45	80263	Tripartite motif-containing 45	2,69	chr1
TRIM50B	375593	tripartite motif-containing 50B	3,84	chr7

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Gene Symbol	Entrez Gene	Gene Title	NPC_up	Chromosome Number(Avadis)
TRO	7216	trophinin /// trophinin	2,25	chrX
TRPM3	80036	transient receptor potential cation channel, subfamily M, member 3	3,58	chr9
TRPM8	79054	transient receptor potential cation channel, subfamily M, member 8	2,24	chr2
TSGA14	95681	testis specific, 14	3,15	chr7
TSPAN14	81619	tetraspanin 14	2,32	chr10
TSPAN18	90139	tetraspanin 18	3,72	chr11
TSPAN3	10099	Tetraspanin 3	2,18	chr15
TSPAN5	10098	tetraspanin 5 /// tetraspanin 5	2,53	chr4
TSPYL2	64061	TSPY-like 2	2,03	chrX
TSPYL4	23270	TSPY-like 4	2,30	chr6
TTBK2	146057	tau tubulin kinase 2	2,27	chr15
TTC10	8100	tetratricopeptide repeat domain 10	2,70	chr13
TTC12	54970	tetratricopeptide repeat domain 12	2,99	chr11
TTC14	151613	Tetratricopeptide repeat domain 14	2,11	chr3
TTC17	55761	tetratricopeptide repeat domain 17	2,90	chr11
TTC3	7267	tetratricopeptide repeat domain 3	5,88	chr21
TTYH1	57348	tweety homolog 1 (Drosophila)	2,45	chr19
TXNIP	10628	thioredoxin interacting protein	3,89	chr1
U2AF1	7307	U2(RNU2) small nuclear RNA auxiliary factor 1	2,01	chr15
UBE2E3	10477	Ubiquitin-conjugating enzyme E2E 3 (UBC4/5 homolog, yeast)	2,28	chr2
UBE2H	7328	Ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast)	2,75	chr7
UBE2I	7329	Ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast)	2,47	chr16
UBE2J1	51465	ubiquitin-conjugating enzyme E2, J1 (UBC6 homolog, yeast)	2,97	chr6
UBE2R2	54926	ubiquitin-conjugating enzyme E2R 2	2,65	chr9
UBE3B	89910	ubiquitin protein ligase E3B	2,05	chr12
UBE3C	9690	Ubiquitin protein ligase E3C	2,38	chr7
UCP2	7351	uncoupling protein 2 (mitochondrial, proton carrier)	2,13	chr11
UGCGL2	55757	UDP-glucose ceramide glucosyltransferase-like 2	2,46	chr13
UHRF1	29128	ubiquitin-like, containing PHD and RING finger domains, 1	2,29	chr12
ULK2	9706	unc-51-like kinase 2 (C. elegans)	3,51	chr17
UNC84B	25777	unc-84 homolog B (C. elegans)	2,07	chr22
USP13	8975	Ubiquitin specific peptidase 13 (isopeptidase T-3)	3,56	chr5
USP3	9960	ubiquitin specific peptidase 3	10,29	chr15
USP30	84749	Ubiquitin specific peptidase 30	3,30	chr12
USP34	9736	Ubiquitin specific peptidase 34	2,80	chr2
USP47	55031	ubiquitin specific peptidase 47	3,03	chr11
USP49	25862	Ubiquitin specific peptidase 49	3,11	chr6
VAMP4	8674	vesicle-associated membrane protein 4	2,40	chr1
VASH1	22846	vasohibin 1	2,51	chr14
VCAM1	7412	vascular cell adhesion molecule 1	3,00	chr1
VEGFC	7424	vascular endothelial growth factor C	2,77	chr4
VGLL4	9686	vestigial like 4 (Drosophila)	2,40	chr3
VprBP	9730	Vpr-binding protein	2,07	chr3
VPS13B	157680	vacuolar protein sorting 13B (yeast)	2,56	chr8
VPS13C	54832	Vacuolar protein sorting 13C (yeast)	2,82	chr15
VPS24	51652	vacuolar protein sorting 24 (yeast)	3,12	chr2
VTCN1	79679	V-set domain containing T cell activation inhibitor 1	5,12	chr1
WASF1	8936	WAS protein family, member 1	2,05	chr6
WASF3	10810	WAS protein family, member 3	4,31	chr13
WASPIP	7456	Wiskott-Aldrich syndrome protein interacting protein	4,75	chr2
WDR1	9948	WD repeat domain 1	2,59	chr4
WDR13	64743	WD repeat domain 13	2,20	chrX
WDR19	57728	WD repeat domain 19	2,60	chr4
WDR27	253769	CDNA FLJ46815 fis, clone TRACH3036897 /// WD repeat domain 27	2,37	chr6
WDR32	79269	WD repeat domain 32	2,92	chr9
WDR33	55339	WD repeat domain 33	2,76	chr2
WDR42A	50717	WD repeat domain 42A	2,05	chr1
WDR5B	54554	WD repeat domain 5B	2,08	chr3
WDR61	80349	WD repeat domain 61	2,14	chr15
WDR68	10238	WD repeat domain 68	2,07	chr17
WDTC1	23038	WD and tetratricopeptide repeats 1	2,17	chr1
WDTC2	9742	WD and tetratricopeptide repeats 2	2,08	chr16
WFIKKN1	117166	WAP, follistatin/kazal, immunoglobulin, kunitz and netrin domain containing 1	2,98	chr16
WHSC1	7468	Wolf-Hirschhorn syndrome candidate 1	5,42	chr4
WHSC1L1	54904	Wolf-Hirschhorn syndrome candidate 1-like 1	2,23	chr8
WNT2B	7482	wingless-type MMTV integration site family, member 2B	3,80	chr1
WNT5A	7474	wingless-type MMTV integration site family, member 5A	5,15	chr3
WNT5B	81029	wingless-type MMTV integration site family, member 5B /// wingless-type MMTV integra	12,12	chr12

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WSB1	26118	WD repeat and SOCS box-containing 1	7,05	chr17
WWOX	51741	B-box and SPRY domain containing	2,51	chr16
XPA	7507	xeroderma pigmentosum, complementation group A	4,10	chr9
XPR1	9213	Xenotropic and polytropic retrovirus receptor	2,32	chr1
YAF2	10138	YY1 associated factor 2	4,72	chr12
YEATS2	55689	YEATS domain containing 2	3,40	chr3
YPEL1	29799	yippee-like 1 (Drosophila)	2,76	chr22
YPEL2	388403	yippee-like 2 (Drosophila)	3,51	chr17
YPEL5	51646	yippee-like 5 (Drosophila)	2,92	chr2
ZADH2	284273	zinc binding alcohol dehydrogenase, domain containing 2	6,70	chr18
ZAK	51776	sterile alpha motif and leucine zipper containing kinase AZK	2,45	chr2
ZBTB10	65986	Zinc finger and BTB domain containing 10	2,33	chr8
ZBTB16	7704	zinc finger and BTB domain containing 16	12,49	chr11
ZBTB20	26137	zinc finger and BTB domain containing 20	2,97	chr3
ZBTB33	10009	zinc finger and BTB domain containing 33	2,01	chrX
ZBTB4	57659	zinc finger and BTB domain containing 4	2,08	chr17
ZC3H11A	9877	zinc finger CCCH-type containing 11A	2,08	chr1
ZC3H12B	340554	zinc finger CCCH-type containing 12B	2,18	chrX
ZC3H12C	85463	zinc finger CCCH-type containing 12C	2,07	chr11
ZC3H8	84524	Zinc finger CCCH-type containing 8	2,17	chr2
ZCCHC11	23318	Zinc finger, CCHC domain containing 11	3,81	chr1
ZCSL2	285381	zinc finger, CSL-type containing 2	2,00	chr3
ZCSL3	120526	Zinc finger, CSL-type containing 3	2,67	chr11
ZFAND3	60685	Zinc finger, AN1-type domain 3	2,77	chr6
ZFHX1B	9839	zinc finger homeobox 1b	3,92	chr2
ZFHX4	79776	zinc finger homeodomain 4	7,11	chr8
ZFP90	146198	Zinc finger protein 90 homolog (mouse)	3,17	chr16
ZFPM2	23414	zinc finger protein, multitype 2	3,09	chr8
ZFR	51663	Zinc finger RNA binding protein	2,01	chr5
ZFYVE16	9765	zinc finger, FYVE domain containing 16	4,24	chr5
ZHX1	11244	zinc fingers and homeoboxes 1	5,85	chr8
ZIC1	7545	Zic family member 1 (odd-paired homolog, Drosophila)	24,39	chr3
ZKSCAN1	7586	Zinc finger with KRAB and SCAN domains 1	4,07	chr7
ZMYND11	10771	zinc finger, MYND domain containing 11	2,46	chr10
ZNF117	7670	Zinc finger protein 117 (HPF9)	5,39	chr7
ZNF124	7678	zinc finger protein 124 (HZF-16)	3,45	chr1
ZNF131	7690	Zinc finger protein 131 (clone pHZ-10)	2,04	chr5
ZNF141	7700	Zinc finger protein 141 (clone pHZ-44)	2,37	chr4
ZNF148	7707	Zinc finger protein 148 (pHZ-52)	3,57	chr3
ZNF161	7716	zinc finger protein 161	2,75	chr3
ZNF177	7730	zinc finger protein 177	2,53	chr19
ZNF185	7739	zinc finger protein 185 (LIM domain)	2,31	chrX
ZNF193	7746	zinc finger protein 193	2,42	chr6
ZNF218	128553	Zinc finger protein 218	2,30	chr20
ZNF22	7570	zinc finger protein 22 (KOX 15)	2,16	chr10
ZNF226	7769	zinc finger protein 226	2,21	chr19
ZNF264	9422	zinc finger protein 264	2,17	chr19
ZNF266	10781	zinc finger protein 266	2,46	chr19
ZNF274	10782	zinc finger protein 274	2,12	chr19
ZNF297B	23099	zinc finger protein 297B	2,24	chr9
ZNF302	55900	zinc finger protein 302	2,20	chr19
ZNF334	55713	zinc finger protein 334	2,12	chr20
ZNF343	79175	zinc finger protein 343	2,21	chr20
ZNF346	23567	zinc finger protein 346	3,63	chr5
ZNF354B	117608	Zinc finger protein 354B	2,27	chr5
ZNF37B	256112	zinc finger protein 37b (KOX 21)	2,25	chr10
ZNF390	222696	zinc finger protein 390	2,16	chr6
ZNF395	55893	zinc finger protein 395	2,17	chr8
ZNF410	57862	zinc finger protein 410	2,36	chr14
ZNF42	7593	zinc finger protein 42 (myeloid-specific retinoic acid-responsive)	2,01	chr19
ZNF436	80818	zinc finger protein 436	4,19	chr1
ZNF44	51710	Zinc finger protein 44 (KOX 7)	3,06	chr19
ZNF447	65982	zinc finger protein 447	3,12	chr19
ZNF452	114821	zinc finger protein 452	2,01	(vide)
ZNF471	57573	Zinc finger protein 471	2,20	chr19
ZNF503	84858	zinc finger protein 503	16,13	chr10
ZNF510	22869	Zinc finger protein 510	2,15	chr9
ZNF514	84874	zinc finger protein 514	3,44	chr2

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Gene Symbol	Entrez Gene	Gene Title	NPC_up	Chromosome Number(Avadis)
ZNF516	9658	zinc finger protein 516	**4,43**	chr18
ZNF518	9849	Zinc finger protein 518	**2,33**	(vide)
ZNF519	162655	zinc finger protein 519	**4,03**	chr18
ZNF521	25925	zinc finger protein 521	**13,21**	chr18
ZNF533	151126	zinc finger protein 533	**4,31**	chr2
ZNF544	27300	Zinc finger protein 544	**3,33**	chr19
ZNF548	147694	zinc finger protein 548	**2,16**	chr19
ZNF580	51157	zinc finger protein 580	**2,39**	chr19
ZNF606	80095	zinc finger protein 606	**2,25**	chr19
ZNF608	57507	zinc finger protein 608	**2,55**	chr5
ZNF618	114991	zinc finger protein 618	**2,82**	chr9
ZNF621	285268	zinc finger protein 621	**2,13**	chr3
ZNF629	23361	zinc finger protein 629	**2,66**	chr16
ZNF641	121274	zinc finger protein 641	**3,75**	chr12
ZNF664	144348	zinc finger protein 664	**4,39**	chr12
ZNF70	7621	Zinc finger protein 70 (Cos17)	**3,67**	chr22
ZNF703	80139	zinc finger protein 703	**4,24**	chr8
ZNF708	7562	Zinc finger protein 708 (KOX8)	**2,32**	chr19
ZNF709	163051	zinc finger protein 709	**2,86**	chr19
ZNF710	374655	Zinc finger protein 710	**8,82**	chr15
ZNF83	55769	Zinc finger protein 83 (HPF1)	**3,79**	chr19
ZNF84	7637	Zinc finger protein 84 (HPF2)	**4,42**	chr12
ZNF91	7644	Zinc finger protein 91 (HPF7, HTF10)	**2,89**	chr19
ZNRF1	84937	zinc and ring finger 1	**2,10**	chr16
ZRF1	27000	Zuotin related factor 1	**2,93**	chr7
ZSWIM6	57688	zinc finger, SWIM-type containing 6	**5,08**	chr5

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Table S3 : Genes downregulated in NPC compared to hES (Fold Change > 2; $\alpha < 0.05$)

Gene Symbol	Entrez Gene	Gene Title	NPC_down	Chromosome Number(Avadis)
37316	92935	methionine-tRNA synthetase 2 (mitochondrial)	2,04	chr2
37500	4735	septin 2	2,17	chr2
38961	23157	septin 6	2,96	chrX
AAMP	14	angio-associated, migratory cell protein	2,36	chr2
AARS	16	alanyl-tRNA synthetase	2,24	chr16
AASS	10157	aminoadipate-semialdehyde synthase	6,49	chr7
ABHD4	63874	abhydrolase domain containing 4	2,19	chr14
ABHD5	51099	abhydrolase domain containing 5	3,19	chr3
ABHD9	79852	abhydrolase domain containing 9	5,63	chr19
ACAA2	10449	acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme	2,51	chr18
ACAD8	27034	acyl-Coenzyme A dehydrogenase family, member 8	2,11	chr11
ACADSB	36	acyl-Coenzyme A dehydrogenase, short/branched chain	2,18	chr10
ACOT7	11332	acyl-CoA thioesterase 7	2,37	chr1
ACOT8	10005	Acyl-CoA thioesterase 8	3,12	chr20
ACOX1	51	acyl-Coenzyme A oxidase 1, palmitoyl	3,16	chr17
ACSL1	2180	acyl-CoA synthetase long-chain family member 1	2,48	chr4
ACTB	60	actin, beta	2,34	(vide)
ACY1	95	aminoacylase 1	2,59	chr3
AD-003	28989	AD-003 protein	2,48	chr9
ADAMTS8	11095	ADAM metallopeptidase with thrombospondin type 1 motif, 8	4,79	chr11
ADCY2	108	adenylate cyclase 2 (brain)	15,50	chr5
ADD2	119	adducin 2 (beta)	4,26	chr2
ADM	133	adrenomedullin	2,02	chr11
ADRA2A	150	adrenergic, alpha-2A-, receptor /// adrenergic, alpha-2A-, receptor	3,05	chr10
ADRM1	11047	adhesion regulating molecule 1	3,40	chr20
AER61	285203	AER61 glycosyltransferase	2,95	chr3
AFG3L2	10939	AFG3 ATPase family gene 3-like 2 (yeast)	2,56	chr18
AGPS	8540	Alkylglycerone phosphate synthase	2,08	chr2
AGTRAP	57085	angiotensin II receptor-associated protein	2,26	chr1
AIM1	202	absent in melanoma 1	8,04	chr6
AK2	204	adenylate kinase 2	2,32	chr1
AK3L1	205	adenylate kinase 3-like 1	3,20	chr1
AK3L1	205 /// 387851	adenylate kinase 3-like 1 /// adenylate kinase 3-like 2	4,00	chr1
AKAP1	8165	A kinase (PRKA) anchor protein 1	2,21	chr17
AKAP7	9465	A kinase (PRKA) anchor protein 7	2,66	chr6
ALDOA	226	aldolase A, fructose-bisphosphate	2,39	chr16
ALDOC	230	aldolase C, fructose-bisphosphate	3,69	chr17
ALG3	10195	asparagine-linked glycosylation 3 homolog (yeast, alpha-1,3-mannosyltrar	2,21	chr3
ALMS1	7840	Alstrom syndrome 1	3,31	chr2
AMID	84883	apoptosis-inducing factor (AIF)-like mitochondrion-associated inducer of d	2,13	chr10
AMMECR1	9949	Alport syndrome, mental retardation, midface hypoplasia and elliptocytosis	2,30	chrX
AMSH-LP	57559	associated molecule with the SH3 domain of STAM (AMSH) like protein	2,86	chr10
ANGEL2	90806	Angel homolog 2 (Drosophila)	8,58	chr1
ANKHD1	54882	ankyrin repeat and KH domain containing 1	3,44	chr5
ANKRD11	29123	ankyrin repeat domain 11	2,09	chr16
ANKRD39	51239	ankyrin repeat domain 39	2,78	chr2
ANKRD41	126549	ankyrin repeat domain 41	2,22	chr19
ANP32A	8125	Acidic (leucine-rich) nuclear phosphoprotein 32 family, member A	2,14	chr15
ANXA4	307	annexin A4	2,67	chr2
AP1M2	10053	adaptor-related protein complex 1, mu 2 subunit	6,96	chr19
AP1S3	130340	Adaptor-related protein complex 1, sigma 3 subunit	2,14	chr2
AP2S1	1175	adaptor-related protein complex 2, sigma 1 subunit	2,04	chr19
APBB2	323	amyloid beta (A4) precursor protein-binding, family B, member 2 (Fe65-lik	2,24	chr4
APOBEC3B	9582	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3B	2,97	chr22
APOC1	341	apolipoprotein C-I	3,35	chr19
APOE	348	apolipoprotein E	3,65	chr19
APRT	353	adenine phosphoribosyltransferase	2,63	chr16
ARF4	378	ADP-ribosylation factor 4	2,25	chr3
ARF6	382	ADP-ribosylation factor 6	2,63	chr14
ARFGEF1	10565	ADP-ribosylation factor guanine nucleotide-exchange factor 1(brefeldin A-	2,46	chr8
ARHGAP8	23779 /// 553158	Rho GTPase activating protein 8 /// PRR5-ARHGAP8 fusion	4,84	chr22
ARHGEF5	7984	Rho guanine nucleotide exchange factor (GEF) 5	2,72	chr7
ARHGEF9	23229	Cdc42 guanine nucleotide exchange factor (GEF) 9	3,08	chrX
ARIH2	10425	ariadne homolog 2 (Drosophila)	2,08	chr3
ARL8	221079	ADP-ribosylation factor-like 8	2,15	chr10
ARPC5L	81873	actin related protein 2/3 complex, subunit 5-like	2,33	chr9

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ASAHL	27163	N-acylsphingosine amidohydrolase (acid ceramidase)-like	2,29	chr4
ASS	445	argininosuccinate synthetase	7,38	chr5
ATF1	466	activating transcription factor 1	2,38	chr12
ATG3	64422	ATG3 autophagy related 3 homolog (S. cerevisiae)	2,62	chr3
ATG5	9474	ATG5 autophagy related 5 homolog (S. cerevisiae)	2,22	chr6
ATP5G1	516	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subu	2,93	chr17
ATP5G3	518	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subu	2,50	chr2
ATP5H	10476	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit d	2,40	chr9
ATP5I	521	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit e	2,51	chr4
ATP6V1C1	528	ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C, isoform 1	3,29	chr8
ATPBD1B	54707	ATP binding domain 1 family, member B	2,23	chr1
AURKAIP1	54998	aurora kinase A interacting protein 1	2,94	chr1_random
AVPI1	60370	arginine vasopressin-induced 1	2,08	chr10
B3GNT7	93010	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 7	7,97	chr2
B4GALT4	8702	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 4	2,26	chr3
BAG2	9532	BCL2-associated athanogene 2	4,88	chr6
BAG4	9530	BCL2-associated athanogene 4	2,02	chr8
BAT2D1	23215	BAT2 domain containing 1	2,02	chr1
BAX	581	BCL2-associated X protein	3,17	chr19
BCCIP	56647	BRCA2 and CDKN1A interacting protein	2,37	chr10
BCL11A	53335	B-cell CLL/lymphoma 11A (zinc finger protein)	4,92	chr2
BCL11B	64919	B-cell CLL/lymphoma 11B (zinc finger protein)	3,88	chr14
BCL2L11	10018	BCL2-like 11 (apoptosis facilitator)	3,29	chr2
BCL2L12	83596	BCL2-like 12 (proline rich)	2,47	chr19
BCOR	54880	BCL6 co-repressor	3,24	chrX
BDP1	55814	B double prime 1, subunit of RNA polymerase III transcription initiation fac	2,53	chr5
BICD1	636	bicaudal D homolog 1 (Drosophila)	4,31	chr12
BLVRA	644	biliverdin reductase A	2,02	chr7
BLVRB	645	biliverdin reductase B (flavin reductase (NADPH))	2,47	chr19
BMPR2	659	bone morphogenetic protein receptor, type II (serine/threonine kinase)	2,18	chr2
BNC2	54796	Basonuclin 2	2,54	chr9
BOLA2	552900	bolA-like 2 (E. coli)	2,82	chr16
BOLA3	388962	bolA-like 3 (E. coli)	2,09	chr2
BOP1	23246	block of proliferation 1	2,58	chr8
BRAF	673	v-raf murine sarcoma viral oncogene homolog B1	2,03	chr7
BRWD3	254065	bromodomain and WD repeat domain containing 3	2,22	chrX
BSCL2	221092 /// 26580	Bernardinelli-Seip congenital lipodystrophy 2 (seipin) /// heterogeneous nu	2,32	chr11
BSPRY	54836	B-box and SPRY domain containing	2,33	chr9
BTBD15	29068	BTB (POZ) domain containing 15	2,17	chr11
BTBD7	55727	BTB (POZ) domain containing 7	3,07	chr14
BTD	686	biotinidase	2,34	chr3
BUB1	699	BUB1 budding uninhibited by benzimidazoles 1 homolog (yeast)	2,78	chr2
BXDC1	84154	brix domain containing 1	2,04	chr6
BYSL	705	bystin-like	2,15	chr6
C10orf42	90550	chromosome 10 open reading frame 42	2,05	chr10
C10orf47	254427	chromosome 10 open reading frame 47	2,10	chr10
C10orf70	55847	chromosome 10 open reading frame 70	2,11	chr10
C10orf77	79847	chromosome 10 open reading frame 77	2,08	chr10
C10orf95	54808 /// 79946	Chromosome 10 open reading frame 95 /// Dymeclin	3,30	chr10
C11orf32	442871	chromosome 11 open reading frame 32	2,69	chr11
C12orf10	60314	chromosome 12 open reading frame 10	2,16	chr12
C12orf11	55726	chromosome 12 open reading frame 11	2,08	chr12
C13orf3	221150	chromosome 13 open reading frame 3	2,32	chr13
C14orf115	55237	chromosome 14 open reading frame 115	7,70	chr14
C14orf122	51016	chromosome 14 open reading frame 122	2,28	chr14
C14orf150	112840	chromosome 14 open reading frame 150	2,08	chr14
C14orf151	84800	chromosome 14 open reading frame 151 /// chromosome 14 open reading	2,04	chr14
C14orf156	81892	chromosome 14 open reading frame 156 /// chromosome 14 open reading	2,26	chr14
C15orf25	55142	chromosome 15 open reading frame 25	2,25	chr15
C16orf35	8131	chromosome 16 open reading frame 35	2,07	chr16
C17orf39	79018	chromosome 17 open reading frame 39	2,20	chr17
C19orf25	148223	chromosome 19 open reading frame 25	2,08	chr19
C19orf33	64073	chromosome 19 open reading frame 33	2,81	chr19
C1GALT1	56913	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltra	2,88	chr7
C1orf108	79647	chromosome 1 open reading frame 108	4,91	chr1
C1orf121	51029	chromosome 1 open reading frame 121	4,24	chr1

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Gene Symbol	Entrez Gene	Gene Title	NPC_down	Chromosome Number(Avadis)
C1orf135	79000	chromosome 1 open reading frame 135	2,13	chr1
C1orf163	65260	chromosome 1 open reading frame 163	3,02	chr1
C1orf25	81627	chromosome 1 open reading frame 25	2,25	chr1
C1orf31	388753	chromosome 1 open reading frame 31	2,19	chr1
C1orf43	25912	chromosome 1 open reading frame 43	6,30	chr1
C1orf59	113802	chromosome 1 open reading frame 59	3,56	chr1
C1orf67	200095	chromosome 1 open reading frame 67	3,05	chr1
C1orf69	200205	chromosome 1 open reading frame 69	2,30	chr1
C1orf77	26097	chromosome 1 open reading frame 77	2,04	chr1
C1orf97	84791	chromosome 1 open reading frame 97 /// chromosome 1 open reading fra	3,59	chr1
C1QBP	708	Complement component 1, q subcomponent binding protein	2,92	chr17
C20orf11	54994	chromosome 20 open reading frame 11	2,16	chr20
C20orf118	140711	Chromosome 20 open reading frame 118	8,42	chr20
C20orf19	55857	chromosome 20 open reading frame 19	2,65	chr20
C20orf31	55741	chromosome 20 open reading frame 31	2,68	chr20
C20orf35	55861	chromosome 20 open reading frame 35	3,34	chr20
C20orf42	55612	chromosome 20 open reading frame 42	7,93	chr20
C20orf6	51575	chromosome 20 open reading frame 6	2,57	chr20
C20orf7	79133	chromosome 20 open reading frame 7	2,08	chr20
C21orf45	54069	chromosome 21 open reading frame 45	2,05	chr21
C22orf16	400916	chromosome 22 open reading frame 16	3,78	chr22
C2F	10436	C2f protein	3,21	chr12
C3F	10162	putative protein similar to nessy (Drosophila)	2,56	chr12
C3orf14	57415	chromosome 3 open reading frame 14	2,29	chr3
C5orf18	7905	chromosome 5 open reading frame 18	2,65	chr5
C6orf117	112609	chromosome 6 open reading frame 117	9,75	chr6
C6orf150	115004	chromosome 6 open reading frame 150	2,12	chr6
C6orf189	221303	chromosome 6 open reading frame 189	2,21	chr6
C6orf192	116843	chromosome 6 open reading frame 192	2,41	chr6
C6orf211	79624	chromosome 6 open reading frame 211	2,19	chr6
C6orf55	51534	chromosome 6 open reading frame 55	2,34	chr6
C6orf62	81688	chromosome 6 open reading frame 62	2,14	chr6
C6orf66	29078	chromosome 6 open reading frame 66	2,97	chr6
C7orf20	51608	chromosome 7 open reading frame 20	2,00	chr7
C7orf28A	221960 /// 51622	chromosome 7 open reading frame 28A /// chromosome 7 open reading f	2,42	chr3
C7orf30	115416	chromosome 7 open reading frame 30	2,05	chr7
C8orf38	137682	chromosome 8 open reading frame 38	2,34	chr8
C8orf42	157695	Chromosome 8 open reading frame 42	2,07	chr8
C9orf41	138199	chromosome 9 open reading frame 41	2,26	chr9
C9orf82	79886	chromosome 9 open reading frame 82	2,01	chr9
CABYR	26256	calcium binding tyrosine-(Y)-phosphorylation regulated (fibrousheathin 2)	2,27	chr18
CACYBP	27101	calcyclin binding protein	3,07	chr1
CADPS2	93664	Ca2+-dependent activator protein for secretion 2	2,86	chr7
CALB1	793	calbindin 1, 28kDa	6,00	chr8
CALM3	808	calmodulin 3 (phosphorylase kinase, delta)	2,37	chr19
CALN1	83698	Calneuron 1	3,54	chr7
CALU	813	calumenin	2,00	chr7
CAMKV	79012	CaM kinase-like vesicle-associated	2,99	chr3
CANX	821	calnexin	2,24	chr5
CAPG	822	capping protein (actin filament), gelsolin-like	6,00	chr2
CAPN1	823	calpain 1, (mu/I) large subunit	2,60	chr11
CAPZB	832	capping protein (actin filament) muscle Z-line, beta	2,03	chr1
CARD11	84433	caspase recruitment domain family, member 11	3,90	chr7
CARHSP1	23589	calcium regulated heat stable protein 1, 24kDa	2,59	chr16
CASP3	836	caspase 3, apoptosis-related cysteine peptidase	2,31	chr4
CBR1	873	carbonyl reductase 1	6,13	chr21
CBR3	874	carbonyl reductase 3	4,42	chr21
CCDC4	389206	coiled-coil domain containing 4	4,98	chr4
CCNA1	8900	cyclin A1	2,06	chr13
CCNA2	890	cyclin A2	2,16	chr4
CCND2	894	Cyclin D2	2,79	chr12
CCNF	899	cyclin F	2,60	chr16
CCRN4L	25819	CCR4 carbon catabolite repression 4-like (S. cerevisiae)	2,27	chr4
CCT2	10576	chaperonin containing TCP1, subunit 2 (beta)	2,11	chr12
CD164	8763	CD164 antigen, sialomucin	2,47	chr6
CD24	934	CD24 antigen (small cell lung carcinoma cluster 4 antigen)	15,01	chr5

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CD2AP	23607	CD2-associated protein	2,45	chr6
CD320	51293	CD320 antigen	2,22	chr19
CD3EAP	10849	CD3E antigen, epsilon polypeptide associated protein	2,65	chr19
CD9	928	CD9 antigen (p24)	9,84	chr12
CDC37L1	55664	CDC37 cell division cycle 37 homolog (S. cerevisiae)-like 1	2,81	chr9
CDCA2	157313	cell division cycle associated 2	2,05	chr8
CDCA7L	55536	cell division cycle associated 7-like	2,71	chr7
CDCP1	64866	CUB domain containing protein 1	3,37	chr3
CDH1	999	cadherin 1, type 1, E-cadherin (epithelial)	3,71	chr16
CDH3	1001	cadherin 3, type 1, P-cadherin (placental)	2,37	chr16
CDK2AP2	10263	CDK2-associated protein 2	2,37	chr11
CDK5	1020	cyclin-dependent kinase 5	2,01	chr8
CDK6	1021	cyclin-dependent kinase 6	3,10	chr7
CDK7	1022	cyclin-dependent kinase 7 (MO15 homolog, Xenopus laevis, cdk-activatin	2,23	chr5
CDKL5	6792	Cyclin-dependent kinase-like 5	3,07	chrX
CEBPZ	10153	CCAAT/enhancer binding protein zeta	3,32	chr2
CECR2	27443	cat eye syndrome chromosome region, candidate 2	2,39	chr22
CENTB1	9744	centaurin, beta 1	2,05	chr17
CGI-115	51018	CGI-115 protein	2,41	chr1
CGI-37	51388	comparative gene identification transcript 37	2,04	chr16
CGI-69	51629	CGI-69 protein	2,15	chr17
CGNL1	84952	cingulin-like 1	4,15	chr15
CHCHD4	131474	coiled-coil-helix-coiled-coil-helix domain containing 4	2,36	chr3
CHCHD7	79145	coiled-coil-helix-coiled-coil-helix domain containing 7	3,05	chr8
CHEK1	1111	CHK1 checkpoint homolog (S. pombe)	2,23	chr11
CHEK2	11200	CHK2 checkpoint homolog (S. pombe)	2,31	chr22
CHES1	1112	checkpoint suppressor 1	2,22	chr14
CHFR	55743	checkpoint with forkhead and ring finger domains	2,40	chr12
CHGB	1114	chromogranin B (secretogranin 1)	2,32	chr20
CHIC2	26511	cysteine-rich hydrophobic domain 2	2,33	chr4
CHKA	1119	choline kinase alpha	2,08	chr11
CHPT1	56994	choline phosphotransferase 1	2,01	chr12
CHST4	10164	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 4	7,93	chr16
CHST7	56548	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 7	5,10	chrX
CHURC1	91612	churchill domain containing 1	2,05	chr1
CIRH1A	84916	cirrhosis, autosomal recessive 1A (cirhin)	2,18	chr16
CKMT1B	1159 /// 548596	creatine kinase, mitochondrial 1B /// creatine kinase, mitochondrial 1A	10,16	chr15
CLCC1	23155	chloride channel CLIC-like 1	2,38	chr1
CLDN10	9071	claudin 10	2,04	chr13
CLDN23	137075	claudin 23	2,16	chr8
CLDN6	9074	claudin 6	6,34	chr1
CLDN7	1366	claudin 7	4,38	chr17
CLIC4	25932	chloride intracellular channel 4	4,79	chr1
CLN8	2055	ceroid-lipofuscinosis, neuronal 8 (epilepsy, progressive with mental retard	2,50	chr8
COBL	23242	cordon-bleu homolog (mouse)	6,85	chr7
COL9A3	1299	collagen, type IX, alpha 3	2,94	chr20
COMMD7	149951	COMM domain containing 7	2,26	chr20
COMTD1	118881	catechol-O-methyltransferase domain containing 1	4,63	chr10
COQ3	51805	coenzyme Q3 homolog, methyltransferase (yeast)	2,28	chr6
COX5B	1329	cytochrome c oxidase subunit Vb	2,15	chr2
COX6A1	1337	cytochrome c oxidase subunit VIa polypeptide 1 /// cytochrome c oxidase	9,62	(vide)
COX7B	1349	cytochrome c oxidase subunit VIIb	2,17	chrX
CPT1A	1374	carnitine palmitoyltransferase 1A (liver)	3,19	chr11
CRB3	92359	crumbs homolog 3 (Drosophila)	2,25	chr19
CRK7	51755	CDC2-related protein kinase 7	2,06	chr17
CRSP2	9282	cofactor required for Sp1 transcriptional activation, subunit 2, 150kDa	2,01	chrX
CRTAP	10491	cartilage associated protein	2,22	chr3
CRYM	1428	crystallin, mu	3,28	chr16
CSDA	8531	cold shock domain protein A	2,46	chr12
CSNK1E	1454	Casein kinase 1, epsilon	2,32	chr22
CSNK2A1	1457	casein kinase 2, alpha 1 polypeptide	3,50	chr20
CSPG5	10675	chondroitin sulfate proteoglycan 5 (neuroglycan C)	2,00	chr3
CSTF1	1477	cleavage stimulation factor, 3' pre-RNA, subunit 1, 50kDa	2,27	chr20
CSTF2	1478	cleavage stimulation factor, 3' pre-RNA, subunit 2, 64kDa	2,49	chrX
CTBP2	1488	C-terminal binding protein 2	2,12	chr5
CTNNA1	1495	Catenin (cadherin-associated protein), alpha 1, 102kDa	2,16	chr5

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CTPS2	56474	CTP synthase II	3,06	chrX
CTSC	1075	cathepsin C	5,33	chr11
CTSD	1509	cathepsin D (lysosomal aspartyl peptidase)	2,07	chr11
CTTN	2017	cortactin	2,25	chr11
CUL4A	8451	Cullin 4A	2,30	chr13
CXADR	1525	coxsackie virus and adenovirus receptor	2,26	chr21
CXCL12	6387	chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)	4,19	chr10
CXCL5	6374	chemokine (C-X-C motif) ligand 5	5,46	chr4
CXCL6	6372	chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)	2,39	chr4
CXorf15	55787	chromosome X open reading frame 15	2,21	chrX
CXorf26	51260	chromosome X open reading frame 26	2,38	chrX
CXorf39	139231	Chromosome X open reading frame 39	2,36	chrX
CYB5	1528	cytochrome b-5	2,55	chr18
CYB5R2	51700	cytochrome b5 reductase 2	2,28	chr11
CYBA	1535	cytochrome b-245, alpha polypeptide	2,07	chr16
CYP2B7P1	1556	cytochrome P450, family 2, subfamily B, polypeptide 7 pseudogene 1	2,44	chr19
CYP2S1	29785	cytochrome P450, family 2, subfamily S, polypeptide 1	8,51	chr19
CYP4X1	260293	cytochrome P450, family 4, subfamily X, polypeptide 1	2,77	chr1
D15Wsu75e	27351	DNA segment, Chr 15, Wayne State University 75, expressed	2,20	chr22
D4S234E	27065	DNA segment on chromosome 4 (unique) 234 expressed sequence	2,46	chr4
DAB1	115209 /// 1600	disabled homolog 1 (Drosophila) /// OMA1 homolog, zinc metallopeptidase	2,78	chr1
DAF	1604	decay accelerating factor for complement (CD55, Cromer blood group sys	3,89	chr1
DATF1	11083	death associated transcription factor 1	3,24	chr20
DAZAP1	26528	DAZ associated protein 1	2,19	chr19
DBC1	1620	deleted in bladder cancer 1	7,99	chr9
DCAMKL1	9201	doublecortin and CaM kinase-like 1	5,60	chr13
DCPS	28960	decapping enzyme, scavenger	2,54	chr11
DCUN1D5	84259	DCN1, defective in cullin neddylation 1, domain containing 5 (S. cerevisiae	2,03	chr11
DCXR	51181	dicarbonyl/L-xylulose reductase	2,53	chr17
DDT	1652	D-dopachrome tautomerase	4,84	chr22
DDX18	8886	DEAD (Asp-Glu-Ala-Asp) box polypeptide 18	2,50	chr2
DDX25	29118	DEAD (Asp-Glu-Ala-Asp) box polypeptide 25	2,32	chr11
DDX3X	1654	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, X-linked	2,68	chrX
DDX58	23586	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	2,05	chr9
DENND2C	163259	DENN/MADD domain containing 2C	2,83	chr1
DENR	8562	density-regulated protein	2,68	chr12
DERL1	79139	Der1-like domain family, member 1	2,00	chr8
DFFA	1676	DNA fragmentation factor, 45kDa, alpha polypeptide	2,10	chr1
DHCR7	1717	7-dehydrocholesterol reductase	2,49	chr11
DHFR	1719	dihydrofolate reductase	2,19	chr4
DIAPH2	1730	diaphanous homolog 2 (Drosophila)	3,20	chrX
DIPA	11007	hepatitis delta antigen-interacting protein A	2,71	chr11
DKC1	1736	dyskeratosis congenita 1, dyskerin	2,46	chrX
DKFZP564F0	25940	DKFZP564F0522 protein	2,66	chr2
DKFZP564J0	25923	DKFZP564J0863 protein	3,00	chr11
DKFZP564J1	25854	DKFZP564J102 protein	2,97	chr4
DKFZp564J15	54458	DKFZp564J157 protein	2,71	chr12
DKFZP564M0	25906	DKFZP564M082 protein	2,21	chr11
DMXL1	1657	Dmx-like 1	2,13	chr5
DNAJA2	10294	DnaJ (Hsp40) homolog, subfamily A, member 2	4,57	chr16
DNAJA4	55466	DnaJ (Hsp40) homolog, subfamily A, member 4	2,45	chr15
DNAJB6	10049	DnaJ (Hsp40) homolog, subfamily B, member 6	4,52	chr7
DNCL1	8655	dynein, cytoplasmic, light polypeptide 1	2,05	chr14
DNMT3A	1788	DNA (cytosine-5-)-methyltransferase 3 alpha	2,08	chr2
DNMT3B	1789	DNA (cytosine-5-)-methyltransferase 3 beta	7,56	chr20
DNPEP	23549	aspartyl aminopeptidase	3,20	chr2
DOCK4	9732	dedicator of cytokinesis 4	2,02	chr7
DOCK5	80005	dedicator of cytokinesis 5	3,08	chr8
DPH2	1802	DPH2 homolog (S. cerevisiae)	2,22	chr1
DPM1	8813	Dolichyl-phosphate mannosyltransferase polypeptide 1, catalytic subunit	2,15	chr20
DPP3	10072	dipeptidylpeptidase 3	2,22	chr11
DPPA2	151871	developmental pluripotency associated 2	11,70	chr3
DPPA3	359787	developmental pluripotency associated 3	7,34	chr14
DPPA4	55211	developmental pluripotency associated 4	6,72	chr3
DPPA5	340168	developmental pluripotency associated 5	4,32	chr6
DPYSL3	1809	dihydropyrimidinase-like 3	4,18	chr5

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DR1	1810	down-regulator of transcription 1, TBP-binding (negative cofactor 2)	2,71	chr1
DRCTNNB1A	84668	down-regulated by Ctnnb1, a	2,92	chr7
DRG2	1819	developmentally regulated GTP binding protein 2	2,02	chr17
DRIM	27340	down-regulated in metastasis	2,03	chr12
DSTN	11034	Destrin (actin depolymerizing factor)	2,37	chr20
DSU	55686	dilute suppressor	2,53	chr2
DTWD2	285605	DTW domain containing 2	2,07	chr5
DTX3L	151636	deltex 3-like (Drosophila)	2,52	chr3
DUS3L	56931	dihydrouridine synthase 3-like (S. cerevisiae)	2,02	chr19
DUSP5	1847	dual specificity phosphatase 5	2,48	chr10
DUT	1854	dUTP pyrophosphatase	2,95	chr15
DXS9879E	8270	DNA segment on chromosome X (unique) 9879 expressed sequence	3,11	chrX
E2IG5	26355	growth and transformation-dependent protein	2,08	chr3
EAF2	55840	ELL associated factor 2	3,45	chr3
EBNA1BP2	10969	EBNA1 binding protein 2	2,28	chr1
ECAT11	54596	hypothetical protein FLJ10884	7,60	chr1
EDG7	23566	Endothelial differentiation, lysophosphatidic acid G-protein-coupled recept	4,52	chr1
EHD4	30844	EH-domain containing 4	2,20	chr15
EIF1AX	1964	eukaryotic translation initiation factor 1A, X-linked	2,49	chr1
EIF2AK4	440275	eukaryotic translation initiation factor 2 alpha kinase 4	3,08	chr15
EIF2C2	27161	Eukaryotic translation initiation factor 2C, 2	2,23	chr15
EIF3S12	27335	eukaryotic translation initiation factor 3, subunit 12	2,17	chr19
EIF3S4	8666	eukaryotic translation initiation factor 3, subunit 4 delta, 44kDa	2,18	chr19
EIF4E3	317649	eukaryotic translation initiation factor 4E member 3	2,61	chr3
EIF4EBP1	1978	eukaryotic translation initiation factor 4E binding protein 1	3,37	chr8
EIF5	1983	eukaryotic translation initiation factor 5	2,36	chr14
EIF5A	1984	eukaryotic translation initiation factor 5A	4,16	chr10
ELL2	22936	elongation factor, RNA polymerase II, 2	3,13	chr1
ELL3	80237	elongation factor RNA polymerase II-like 3	2,49	chr15
ENPP1	5167	ectonucleotide pyrophosphatase/phosphodiesterase 1	4,84	chr6
ENSA	2029	endosulfine alpha	2,22	chr1
EPB41L4B	54566	erythrocyte membrane protein band 4.1 like 4B	7,33	chr9
EPB41L5	57669	erythrocyte membrane protein band 4.1 like 5	3,65	chr2
EPHA1	2041	EPH receptor A1	8,89	chr7
EPS8L1	54869	EPS8-like 1	2,46	chr19
EPS8L2	64787	EPS8-like 2	3,98	chr11
ERBB2	2064	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblas	2,54	chr17
ESCO1	114799	establishment of cohesion 1 homolog 1 (S. cerevisiae)	2,39	chr18
ESRRA	2101	estrogen-related receptor alpha	2,10	chr11
ETF1	2107	eukaryotic translation termination factor 1	2,07	chr5
ETV4	2118	ets variant gene 4 (E1A enhancer binding protein, E1AF) /// ets variant ge	3,34	chr22
EXOSC2	23404	exosome component 2	2,62	chr9
EXOSC3	51010	exosome component 3	3,11	chr9
EXOSC4	54512	exosome component 4	2,09	chr8
EXOSC5	56915	exosome component 5	2,95	chr19
F11R	50848	F11 receptor	3,53	chr1
F2RL1	2150	coagulation factor II (thrombin) receptor-like 1	5,03	chr5
F8A1	8263	coagulation factor VIII-associated (intronic transcript) 1	2,09	chrX
FABP5	2171	fatty acid binding protein 5 (psoriasis-associated)	2,87	chr7
FADS3	3995	fatty acid desaturase 3	3,05	chr11
FAIM	55179	Fas apoptotic inhibitory molecule	2,14	chr3
FALZ	2186	fetal Alzheimer antigen	3,35	chr17
FAM29A	54801	family with sequence similarity 29, member A	2,01	chr7
FAM36A	116228	family with sequence similarity 36, member A	2,46	chr1
FAM46B	115572	family with sequence similarity 46, member B	8,50	chr1
FAM80A	284716	family with sequence similarity 80, member A	2,18	chr1
FAM91A2	388685 /// 57234	family with sequence similarity 91, member A2 /// FLJ39739 protein	3,61	chr1
FANCF	2188	Fanconi anemia, complementation group F	2,23	chr11
FARSLA	2193	phenylalanine-tRNA synthetase-like, alpha subunit	2,95	chr19
FBXL15	79176	F-box and leucine-rich repeat protein 15	2,31	chr10
FBXL16	146330	F-box and leucine-rich repeat protein 16	4,14	chr16
FBXO2	26232	F-box protein 2	2,96	chr1
FBXO22	26263	F-box protein 22	2,85	chr15
FBXO25	26260	F-box protein 25	2,82	chr8
FBXO28	23219	F-box protein 28	2,55	chr1
FEM1B	10116	fem-1 homolog b (C. elegans)	2,07	chr15

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Gene Symbol	Entrez Gene	Gene Title	NPC_down	Chromosome Number(Avadis)
FGD6	55785	FYVE, RhoGEF and PH domain containing 6	2,32	chr12
FGF19	9965	fibroblast growth factor 19	2,77	chr11
FGF2	2247	fibroblast growth factor 2 (basic)	3,80	chr4
FGF4	2249	fibroblast growth factor 4 (heparin secretory transforming protein 1, Kapos	10,26	chr11
FGFR4	2264	fibroblast growth factor receptor 4	3,21	chr5
FKBP11	51303	FK506 binding protein 11, 19 kDa	2,86	chr12
FKBP1A	2280	FK506 binding protein 1A, 12kDa	2,43	chr20
FKBP1B	2281	FK506 binding protein 1B, 12.6 kDa	2,72	chr2
FKBP4	2288	FK506 binding protein 4, 59kDa	2,72	chr12
FLAD1	80308	Fad1, flavin adenine dinucleotide synthetase, homolog (yeast)	2,26	chr1
FLJ10006	55677	hypothetical protein FLJ10006	2,02	chr2
FLJ10534	55720	hypothetical protein FLJ10534	3,22	chr17
FLJ10652	55196	hypothetical protein FLJ10652	4,55	chr12
FLJ10719	55215	hypothetical protein FLJ10719	2,08	chr15
FLJ10826	55239	hypothetical protein FLJ10826	2,98	chr16
FLJ11151	55313	Hypothetical protein FLJ11151	2,06	chr16
FLJ11184	55319	hypothetical protein FLJ11184	2,04	chr4
FLJ11286	55337	hypothetical protein FLJ11286	6,62	chr19
FLJ12505	79805	hypothetical protein FLJ12505	6,81	chr1
FLJ12684	79584	hypothetical protein FLJ12684	4,79	chr4
FLJ13220	60558	hypothetical protein FLJ13220	2,17	chr4
FLJ13491	79676	hypothetical protein FLJ13491	2,33	chr12
FLJ13984	79828	hypothetical protein FLJ13984	3,50	chr2
FLJ20105	54821	FLJ20105 protein	2,18	chrX
FLJ20273	54502	RNA-binding protein	4,07	chr4
FLJ20449	54937	hypothetical protein FLJ20449	7,04	chr13
FLJ20512	54958	hypothetical protein FLJ20512	2,68	chr19
FLJ20516	54962	timeless-interacting protein	2,02	chr15
FLJ20582	54989	hypothetical protein FLJ20582	3,03	chrX
FLJ20641	55010	hypothetical protein FLJ20641	2,08	chr12
FLJ20674	54621	Hypothetical protein FLJ20674	4,41	chr12
FLJ21924	79832	hypothetical protein FLJ21924	2,21	chr11
FLJ22318	64777	hypothetical protein FLJ22318	2,25	chr5
FLJ22662	79887	hypothetical protein FLJ22662	3,99	chr12
FLJ30656	124801	hypothetical protein FLJ30656	2,66	chr8
FLJ30707	220108	hypothetical protein FLJ30707	3,79	chr13
FLJ32810	143872	hypothetical protein FLJ32810	2,30	chr11
FLJ36116	388666	hypothetical locus LOC388666	9,37	chr1
FLJ44186	346689	FLJ44186 protein	4,00	chr7
FLJ46419	388507	FLJ46419 protein	2,93	chr19
FLJ90086	389389	Similar to AI661453 protein	2,60	chr6
FLJ90231	283176	hypothetical protein FLJ90231	14,09	chr11
FLNB	2317	filamin B, beta (actin binding protein 278)	2,37	chr3
FLT1	2321	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular	6,90	chr13
FOXA3	3171	forkhead box A3	4,46	chr19
FOXD3	27022	Forkhead box D3	2,70	chr1
FOXH1	8928	Forkhead box H1	8,54	chr8
FOXO1A	2308	forkhead box O1A (rhabdomyosarcoma)	5,73	chr13
FRAG1	27315	FGF receptor activating protein 1	2,40	chr11
FRAT2	23401	frequently rearranged in advanced T-cell lymphomas 2	8,12	chr10
FTSJ1	24140	FtsJ homolog 1 (E. coli)	2,45	chrX
FXYD5	53827	FXYD domain containing ion transport regulator 5	6,47	chr19
FZD7	8324	frizzled homolog 7 (Drosophila)	2,91	chr2
G3BP2	9908	Ras-GTPase activating protein SH3 domain-binding protein 2	3,48	chr4
GABRA5	2558	gamma-aminobutyric acid (GABA) A receptor, alpha 5	3,52	chr15
GABRB3	2562	gamma-aminobutyric acid (GABA) A receptor, beta 3	14,57	chr15
GABRB3	1653 /// 2562	Gamma-aminobutyric acid (GABA) A receptor, beta 3 /// DEAD (Asp-Glu-/	16,90	chr15
GADD45GIP1	90480	growth arrest and DNA-damage-inducible, gamma interacting protein 1	3,18	chr19
GAL	51083	galanin	37,74	chr11
GALNT3	2591	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyl	12,66	chr2
GALNT7	51809	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyl	2,44	chr4
GAP43	2596	growth associated protein 43	2,40	chr3
GARNL4	23108	GTPase activating Rap/RanGAP domain-like 4	5,50	chr17
GART	2618	Phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide	2,70	chr21
GCAT	23464	glycine C-acetyltransferase (2-amino-3-ketobutyrate coenzyme A ligase)	2,19	chr22
GCHFR	2644	GTP cyclohydrolase I feedback regulator	2,65	chr15

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GCLC	2729	glutamate-cysteine ligase, catalytic subunit	2,51	chr6
GCNT2	2651	glucosaminyl (N-acetyl) transferase 2, I-branching enzyme	3,49	chr6
GCSH	2653	glycine cleavage system protein H (aminomethyl carrier)	2,31	chr5
GDAP1L1	78997	ganglioside-induced differentiation-associated protein 1-like 1	2,09	chr20
GDF3	9573	growth differentiation factor 3	17,78	chr12
GEMIN5	25929	gem (nuclear organelle) associated protein 5	2,09	chr5
GEMIN7	79760	gem (nuclear organelle) associated protein 7	2,69	chr19
GFM1	85476	G elongation factor, mitochondrial 1	2,00	chr3
GFPT1	2673	glutamine-fructose-6-phosphate transaminase 1	2,20	chr2
GGT1	2678	gamma-glutamyltransferase 1	2,11	chr22
GLDC	2731	glycine dehydrogenase (decarboxylating; glycine decarboxylase, glycine c	2,00	chr4
GLOXD1	84842	glyoxalase domain containing 1	4,34	chr1
GLS	2744	glutaminase	2,14	chr2
GLS2	27165	glutaminase 2 (liver, mitochondrial)	3,88	chr12
GMDS	2762	GDP-mannose 4,6-dehydratase	2,64	chr6
GMFB	2764	glia maturation factor, beta	2,40	chr3
GMPPA	29926	GDP-mannose pyrophosphorylase A	2,89	chr2
GNAS	2778	GNAS complex locus	4,11	chr20
GNB1	2782	guanine nucleotide binding protein (G protein), beta polypeptide 1	2,06	chr1
GNG4	2786	guanine nucleotide binding protein (G protein), gamma 4	2,03	chr1
GNPTAB	79158	N-acetylglucosamine-1-phosphate transferase, alpha and beta subunits	5,38	chr12
GOT1	2805	glutamic-oxaloacetic transaminase 1, soluble (aspartate aminotransferase	2,19	chr10
GPC4	2239	glypican 4	8,40	chrX
GPI	2821	glucose phosphate isomerase	2,97	chr19
GPM6B	2824	glycoprotein M6B	2,51	chrX
GPR	11245	putative G protein coupled receptor	5,24	chr15
GPR160	26996	G protein-coupled receptor 160	10,38	chr3
GPR27	2850	G protein-coupled receptor 27	2,67	chr3
GPR54	84634	G protein-coupled receptor 54	2,86	chr19
GPR64	10149	G protein-coupled receptor 64	11,31	chrX
GPRC5B	51704	G protein-coupled receptor, family C, group 5, member B	2,59	chr16
GPS2	2874	G protein pathway suppressor 2	2,20	chr17
GPT2	84706	glutamic pyruvate transaminase (alanine aminotransferase) 2	2,11	chr16
GPX1	2876	glutathione peroxidase 1	2,13	chr3
GPX3	2878	glutathione peroxidase 3 (plasma)	3,16	chr5
GRB10	2887	growth factor receptor-bound protein 10	2,74	chr7
GRPEL1	80273	GrpE-like 1, mitochondrial (E. coli)	3,06	chr4
GRPEL2	134266	GrpE-like 2, mitochondrial (E. coli)	2,43	chr5
GRSF1	2926	G-rich RNA sequence binding factor 1	2,44	chr4
GRTP1	79774	Growth hormone regulated TBC protein 1	3,51	chr13
GSDMDC1	79792	gasdermin domain containing 1	2,21	chr8
GSR	2936	glutathione reductase	2,58	chr8
GSTO1	9446	glutathione S-transferase omega 1	2,50	chr3
GSTO2	119391	glutathione S-transferase omega 2	2,09	chr10
GSTP1	2950	glutathione S-transferase pi	3,02	chr11
GTF2H2	2966	general transcription factor IIH, polypeptide 2, 44kDa	3,50	chr5
GTF3C2	2976	general transcription factor IIIC, polypeptide 2, beta 110kDa	2,12	chr2
GUCA1A	2978	guanylate cyclase activator 1A (retina)	3,15	chr6
GULP1	51454	GULP, engulfment adaptor PTB domain containing 1	3,61	chr2
GYG	2992	glycogenin	2,46	chr3
GYLTL1B	120071	glycosyltransferase-like 1B	3,65	chr11
H2AFJ	55766	H2A histone family, member J	2,04	chr12
HAS3	3038	hyaluronan synthase 3	4,99	chr16
HBII-437	338427 /// 347686	HBII-437 C/D box snoRNA /// HBII-13 snoRNA	4,34	chr15
HDAC8	55869	histone deacetylase 8	4,13	chrX
HDCMA18P	51574	HDCMA18P protein	4,97	chr4
HEATR1	55127	HEAT repeat containing 1	2,02	chr1
HERC5	51191	hect domain and RLD 5	10,06	chr4
HERC6	55008	hect domain and RLD 6	3,70	chr4
HEY2	23493	hairy/enhancer-of-split related with YRPW motif 2	8,67	chr6
HIP2	3093	Huntingtin interacting protein 2	2,11	chr4
HIST1H1A	3024	histone 1, H1a	4,87	chr6
HIST1H1C	3006	histone 1, H1c	3,52	chr6
HIST1H1D	3007	histone 1, H1d	2,30	chr6
HIST3H2A	92815	histone 3, H2a	2,04	chr1
HK1	3098	hexokinase 1	2,55	chr10

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HKE2	10471	HLA class II region expressed gene KE2	2,29	chr6
HLA-DOA	3111	major histocompatibility complex, class II, DO alpha	2,61	chr6
HLA-DPB1	3115	major histocompatibility complex, class II, DP beta 1	2,29	chr6
HLA-DPB2	3116	major histocompatibility complex, class II, DP beta 2 (pseudogene)	48,66	chr6
HLA-F	3134	major histocompatibility complex, class I, F	2,14	chr6
HLRC1	83475	HEAT-like (PBS lyase) repeat containing 1 /// HEAT-like (PBS lyase) repe	2,15	chr19
HMG4L	128872	high-mobility group (nonhistone chromosomal) protein 4-like	2,76	chrX
HMGB1	10357 /// 3146	high-mobility group box 1 /// high-mobility group (nonhistone chromosoma	2,04	chr3
HMOX2	3163	heme oxygenase (decycling) 2	2,86	chr16
HN1	51155	hematological and neurological expressed 1	3,78	chr17
HNRPF	3185	heterogeneous nuclear ribonucleoprotein F	2,38	chr10
HPCL2	26061	2-hydroxyphytanoyl-CoA lyase	2,00	chr3
HPRT1	3251	hypoxanthine phosphoribosyltransferase 1 (Lesch-Nyhan syndrome)	2,14	chrX
HRASLS	57110	HRAS-like suppressor	2,04	chr3
HRASLS3	11145	HRAS-like suppressor 3	18,51	chr11
HRB	3267	HIV-1 Rev binding protein	2,22	chr2
HRLP5	117245	H-rev107-like protein 5	3,45	chr11
HRMT1L3	10196	HMT1 hnRNP methyltransferase-like 3 (S. cerevisiae)	2,04	chr11
HRMT1L6	55170	HMT1 hnRNP methyltransferase-like 6 (S. cerevisiae)	2,00	chr1
HSA9761	27292	dimethyladenosine transferase	2,86	chr5
HSD11B2	3291	hydroxysteroid (11-beta) dehydrogenase 2	2,04	chr16
HSD17B4	3295	hydroxysteroid (17-beta) dehydrogenase 4	2,89	chr5
HSGT1	11319	suppressor of S. cerevisiae gcr2	2,03	chr10
HSPA2	3306	heat shock 70kDa protein 2	10,00	chr14
HSPA4	3308	Heat shock 70kDa protein 4	2,74	chr5
HSPA8	3312	heat shock 70kDa protein 8	2,75	chr3
HSPA9B	3313	heat shock 70kDa protein 9B (mortalin-2)	2,24	chr2
HSPB1	3315	heat shock 27kDa protein 1	2,93	chr7
HSPC111	51491	hypothetical protein HSPC111	4,96	chr5
HSPC176	51693	hematopoietic stem/progenitor cells 176	2,39	chr16
HSPCB	3326	heat shock 90kDa protein 1, beta	3,26	chr6
HSPD1	3329	heat shock 60kDa protein 1 (chaperonin)	2,61	chr5
HSPE1	3336	heat shock 10kDa protein 1 (chaperonin 10)	2,25	chr2
HSUP1	441951	Similar to RPE-spondin	2,86	chr20
HTATIP2	10553	HIV-1 Tat interactive protein 2, 30kDa	4,92	chr11
HTR7	3363	5-hydroxytryptamine (serotonin) receptor 7 (adenylate cyclase-coupled)	2,17	chr8
HYLS1	219844	hydrolethalus syndrome 1	2,14	chr11
ICA1	3382	islet cell autoantigen 1, 69kDa	3,89	chr7
ICAM3	3385	intercellular adhesion molecule 3	3,54	chr19
ID1	3397	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	3,54	chr20
IDE	3416	insulin-degrading enzyme	2,45	chr10
IDH1	3417	isocitrate dehydrogenase 1 (NADP+), soluble	2,55	chr2
IDH3A	3419	isocitrate dehydrogenase 3 (NAD+) alpha	3,56	chr15
IFI30	10437	interferon, gamma-inducible protein 30	4,68	chr19
IFITM1	8519	interferon induced transmembrane protein 1 (9-27)	11,53	chr11
IFITM2	10581	interferon induced transmembrane protein 2 (1-8D)	2,06	chr11
IFITM3	10410	interferon induced transmembrane protein 3 (1-8U)	2,86	chr11
IGFBP6	3489	insulin-like growth factor binding protein 6	2,36	chr12
IL27RA	9466	interleukin 27 receptor, alpha	2,97	(vide)
IMP-1	10642	IGF-II mRNA-binding protein 1	3,10	chr17
IMP3	55272	IMP3, U3 small nucleolar ribonucleoprotein, homolog (yeast)	2,85	chr15
IMP4	92856	IMP4, U3 small nucleolar ribonucleoprotein, homolog (yeast)	2,70	chr2
INDO	3620	indoleamine-pyrrole 2,3 dioxygenase	18,56	chr8
INSR	3643	Insulin receptor	2,46	chr19
IPW	3653	imprinted in Prader-Willi syndrome	2,81	chr15
IQGAP1	8826	IQ motif containing GTPase activating protein 1	2,11	chr15
IQGAP2	10788	IQ motif containing GTPase activating protein 2	3,09	chr5
ISOC2	79763	isochorismatase domain containing 2	3,14	chr19
ITCH	83737	itchy homolog E3 ubiquitin protein ligase (mouse)	2,04	chr20
ITGA6	3655	integrin, alpha 6	3,40	chr2
ITGB1BP3	27231	integrin beta 1 binding protein 3	7,12	chr19
ITGB4BP	3692	integrin beta 4 binding protein	3,15	chr20
ITM2A	9452	integral membrane protein 2A	8,30	chrX
ITM2C	81618	integral membrane protein 2C /// integral membrane protein 2C	2,50	chr2
ITPA	3704	inosine triphosphatase (nucleoside triphosphate pyrophosphatase)	2,25	chr20
ITPR3	3710	inositol 1,4,5-triphosphate receptor, type 3	2,86	chr6

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IVD	3712	isovaleryl Coenzyme A dehydrogenase	2,06	chr15
JAK1	3716	Janus kinase 1 (a protein tyrosine kinase)	2,20	chr1
JARID2	3720	Jumonji, AT rich interactive domain 2	3,19	chr6
JAZF1	221895	juxtaposed with another zinc finger gene 1	4,31	chr7
JMJD1C	221037	jumonji domain containing 1C	2,31	chr10
JMJD2A	9682	jumonji domain containing 2A	2,64	chr1
JMJD2C	23081	jumonji domain containing 2C	2,10	chr9
JMY	133746	junction-mediating and regulatory protein	2,04	chr5
JPH1	56704	junctophilin 1	2,82	chr8
KBTBD8	84541	kelch repeat and BTB (POZ) domain containing 8	4,06	chr3
KCND2	3751	potassium voltage-gated channel, Shal-related subfamily, member 2	2,30	chr7
KCNG3	170850	potassium voltage-gated channel, subfamily G, member 3	3,93	chr2
KCNK1	3775	potassium channel, subfamily K, member 1	3,12	chr1
KCNK12	56660	potassium channel, subfamily K, member 12	2,37	chr2
KCNN2	3781	potassium intermediate/small conductance calcium-activated channel, su	3,55	chr5
KCNS3	3790	potassium voltage-gated channel, delayed-rectifier, subfamily S, member	3,68	chr2
KCTD14	65987	potassium channel tetramerisation domain containing 14	5,10	chr11
KDR	3791	kinase insert domain receptor (a type III receptor tyrosine kinase)	3,69	chr4
KHK	3795	ketohexokinase (fructokinase) /// ketohexokinase (fructokinase)	2,42	chr2
KIAA0020	9933	KIAA0020	2,20	chr9
KIAA0182	23199	KIAA0182 protein	2,30	chr16
KIAA0368	23392	KIAA0368	3,15	chr9
KIAA0494	9813	KIAA0494	2,15	chr1
KIAA0859	51603	KIAA0859	2,41	chr1
KIAA0888	26049	KIAA0888 protein	2,27	chr5
KIAA1008	22894	KIAA1008	2,06	chr13
KIAA1033	23325	KIAA1033	2,07	chr12
KIAA1155	400961	KIAA1155 protein	2,73	chr2
KIAA1244	57221	KIAA1244	2,12	chr6
KIAA1404	57169	KIAA1404 protein	2,16	chr20
KIAA1524	57650	KIAA1524	2,00	chr3
KIAA1553	57673	KIAA1553	2,21	chr6
KIAA1754L	150771	KIAA1754-like	2,17	chr2
KIAA1804	84451	mixed lineage kinase 4	3,66	chr1
KIAA1944	121256	KIAA1944 protein	2,67	chr12
KIF1A	547	kinesin family member 1A	4,01	chr2
KIF5A	3798	Kinesin family member 5A	3,02	chr12
KLF4	9314	Kruppel-like factor 4 (gut)	4,13	chr9
KLF7	8609	Kruppel-like factor 7 (ubiquitous)	2,26	chr2
KLHL7	55975	kelch-like 7 (Drosophila)	4,38	chr7
KLKB1	3818	kallikrein B, plasma (Fletcher factor) 1	8,18	chr4
KRTAP4-7	85287	keratin associated protein 4-7	2,91	chr15
KRTCAP3	200634	keratinocyte associated protein 3	5,12	chr2
KUB3	91419	Ku70-binding protein 3	4,91	chr12
LACTB	114294	lactamase, beta	2,62	chr15
LACTB2	51110	lactamase, beta 2	2,31	chr8
LAMP2	3920	lysosomal-associated membrane protein 2	2,16	chrX
LANCL2	55915	LanC lantibiotic synthetase component C-like 2 (bacterial)	2,50	chr7
LAPTM4B	55353	lysosomal associated protein transmembrane 4 beta	3,70	chr8
LARP2	55132	La ribonucleoprotein domain family, member 2	3,06	chr4
LARP4	113251	La ribonucleoprotein domain family, member 4	2,66	chr12
LARS	51520	leucyl-tRNA synthetase	2,47	chr5
LARS2	23395	leucyl-tRNA synthetase 2, mitochondrial	2,56	chr3
LCK	3932	lymphocyte-specific protein tyrosine kinase	23,95	chr1
LDB2	9079	LIM domain binding 2	4,80	chr4
LECT1	11061	leukocyte cell derived chemotaxin 1	17,62	chr13
LEFTY1	10637	left-right determination factor 1	60,37	chr1
LEFTY2	7044	left-right determination factor 2	11,70	chr1
LGALS1	3956	lectin, galactoside-binding, soluble, 1 (galectin 1)	13,73	chr22
LIAS	11019	lipoic acid synthetase	2,16	chr4
LISCH7	51599	liver-specific bHLH-Zip transcription factor	2,02	chr19
LITAF	9516	lipopolysaccharide-induced TNF factor	2,94	chr16
LNK	10019	lymphocyte adaptor protein	4,33	chr12
LOC114977	114977	hypothetical protein BC014148	2,07	chr19
LOC116238	116238	hypothetical protein BC014072	3,47	chr17
LOC126295	126295	hypothetical protein LOC126295	3,07	chr19

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LOC131076	131076	hypothetical LOC131076	2,11	chr18
LOC138255	138255	OTTHUMP00000021439	20,90	chr9
LOC150084	150084	hypothetical protein LOC150084	2,13	chr21
LOC150371	150371	hypothetical LOC150371	2,42	chr22
LOC151194	151194	similar to hepatocellular carcinoma-associated antigen HCA557b	2,47	chr2
LOC151963	151963	similar to BcDNA:GH11415 gene product	2,13	chr3
LOC153346	153346	hypothetical protein LOC153346	5,83	chr5
LOC153469	153469	hypothetical protein LOC153469	3,95	chr5
LOC155036	155036	hypothetical protein LOC155036	2,02	chr7
LOC157627	157627	hypothetical protein LOC157627	6,16	chr8
LOC169834	169834	hypothetical protein LOC169834	2,01	chr9
LOC201895	201895	hypothetical protein LOC201895	2,28	chr4
LOC202451	202451	hypothetical protein LOC202451	2,63	chr6
LOC253982	253982	hypothetical protein LOC253982	2,02	chr16
LOC283377	283377	hypothetical protein LOC283377	2,41	chr12
LOC283871	283871	hypothetical protein LOC283871	2,25	chr16
LOC284611	284611	hypothetical protein LOC284611	2,04	chr1
LOC284801	284801	hypothetical protein LOC284801	4,31	chr20
LOC285016	285016	hypothetical protein LOC285016	2,90	chr2
LOC285401	285401	hypothetical protein LOC285401	2,02	chr3
LOC286044	286044	hypothetical protein LOC286044	3,25	chr8
LOC342979	342979	hypothetical LOC342979	2,77	chr19
LOC388335	388335	similar to RIKEN cDNA A730055C05 gene	2,23	chr17
LOC388610	388610	hypothetical LOC388610	5,21	chr1
LOC388638	388638	hypothetical LOC388638	4,76	chr1
LOC389362	389362	hypothetical LOC389362	3,83	chr6
LOC389541	389541	similar to CG14977-PA	2,58	chr7
LOC389857	389857	hypothetical protein	2,11	chrX
LOC391020	391020	similar to Interferon-induced transmembrane protein 3 (Interferon-inducibl	2,90	chr1
LOC391833	391833	Similar to 40S ribosomal protein S10	2,80	chr5
LOC400690	400690	hypothetical gene supported by AK092138	2,74	chr19
LOC400948	400948	similar to RIKEN cDNA 2310016E02	2,04	chr2
LOC439949	439949	hypothetical gene supported by AY007155	4,36	chr10
LOC440122	440122	Similar to KRAB zinc finger protein 6D	2,44	chr12
LOC440132	440132	LOC440132	4,16	chr13
LOC440731	440731	LOC440731	2,20	chr1
LOC440737	440737	Similar to 60S ribosomal protein L35	7,02	chr16
LOC441164	441164	Chromosome 6 open reading frame 160	2,08	chr6
LOC441168	441168	hypothetical protein LOC441168	2,26	chr6
LOC441458	441458	hypothetical gene supported by AK091930	4,61	chr9
LOC441628	441628	similar to POU domain, class 5, transcription factor 1 (Octamer-binding tra	18,61	chr1
LOC441762	441762	Similar to CG7467-PA /// Similar to CG7467-PA	2,64	chr16
LOC442447	442447	Similar to Chloride intracellular channel protein 4 (Intracellular chloride ion	8,73	chrX
LOC494143	494143	similar to RIKEN cDNA 2510006C20 gene	3,47	chr2
LOC56902	56902	putatative 28 kDa protein	2,41	chr2
LOC91614	91614	novel 58.3 KDA protein	2,31	chr11
LOC91661	91661	Hypothetical protein BC001610	2,53	(vide)
LOC92345	92345	hypothetical protein BC008207	2,58	chr4
LRP8	7804	low density lipoprotein receptor-related protein 8, apolipoprotein e recepto	2,69	chr1
LRRC16	55604	Leucine rich repeat containing 16	2,43	chr6
LSM7	51690	LSM7 homolog, U6 small nuclear RNA associated (S. cerevisiae)	2,26	chr19
LYAR	55646	hypothetical protein FLJ20425	2,45	chr4
LYPLA2	3 /// 285840 /// 38	lysophospholipase II /// lysophospholipase II pseudogene 1 /// similar to A	2,02	chr1
LYSMD2	256586	LysM, putative peptidoglycan-binding, domain containing 2	2,36	chr15
MAD2L2	10459	MAD2 mitotic arrest deficient-like 2 (yeast)	4,22	chr1
MAGI2	9863	membrane associated guanylate kinase, WW and PDZ domain containing	3,13	chr7
Magmas	51025	mitochondria-associated protein involved in granulocyte-macrophage colo	2,07	chr16
MAL2	114569	mal, T-cell differentiation protein 2	4,78	chr8
MAP1LC3B	81631	microtubule-associated protein 1 light chain 3 beta	3,04	chr12
MAP3K5	4217	mitogen-activated protein kinase kinase kinase 5	2,98	chr6
MAP4	4134	microtubule-associated protein 4	2,64	chr3
MAP4K1	11184	mitogen-activated protein kinase kinase kinase kinase 1	2,45	chr19
MAP7	9053	microtubule-associated protein 7	4,43	chr6
MAPK1	5594	mitogen-activated protein kinase 1	2,51	chr22
MAPK13	5603	mitogen-activated protein kinase 13	3,91	chr6
MAPKAP1	79109	mitogen-activated protein kinase associated protein 1	2,96	chr9

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Gene Symbol	Entrez Gene	Gene Title	NPC_down	Chromosome Number(Avadis)
MARCH3	115123	membrane-associated ring finger (C3HC4) 3	3,65	chr5
MARS	4141	methionine-tRNA synthetase	2,11	chr12
MARVELD3	91862	MARVEL domain containing 3	4,59	chr16
MATK	4145	megakaryocyte-associated tyrosine kinase	2,49	chr19
MATR3	9782	Matrin 3	2,87	chr5
MCART1	92014	mitochondrial carrier triple repeat 1	2,04	chr9
MCCC2	64087	methylcrotonoyl-Coenzyme A carboxylase 2 (beta)	2,06	chr5
MCL1	4170	myeloid cell leukemia sequence 1 (BCL2-related)	2,40	chr1
MCM5	4174	MCM5 minichromosome maintenance deficient 5, cell division cycle 46 (S	2,79	chr22
MDH2	4191	malate dehydrogenase 2, NAD (mitochondrial)	2,26	chr7
MDN1	23195	MDN1, midasin homolog (yeast)	2,13	chr6
ME1	4199	Malic enzyme 1, NADP(+)-dependent, cytosolic	2,20	chr6
ME2	4200	malic enzyme 2, NAD(+)-dependent, mitochondrial	2,03	chr18
MEF2A	4205	MADS box transcription enhancer factor 2, polypeptide A (myocyte enhan	2,22	chr15
MEGF10	84466	MEGF10 protein	4,81	chr5
MFSD3	113655	major facilitator superfamily domain containing 3	3,24	chr8
MGC10993	80775	hypothetical protein MGC10993	2,73	chr2
MGC11324	84803	hypothetical protein MGC11324 /// hypothetical protein MGC11324	2,30	chr4
MGC13017	91368	similar to RIKEN cDNA A430101B06 gene	2,56	chr5
MGC13096	84306	hypothetical protein MGC13096 /// hypothetical protein MGC13096	3,69	chr19
MGC13114	84326	hypothetical protein MGC13114	2,10	chr16
MGC13170	84798	multidrug resistance-related protein /// multidrug resistance-related protein	2,42	chr19
MGC14798	89978	similar to RIKEN cDNA 5730421E18 gene	3,29	chr15
MGC15763	92106	hypothetical protein BC008322	2,37	chr3
MGC17299	128218	hypothetical protein MGC17299	5,60	chr1
MGC19604	112812	similar to RIKEN cDNA B230118G17 gene	2,14	chr19
MGC21881	389741	hypothetical protein MGC21881	2,55	chr9
MGC22793	221908	hypothetical protein MGC22793	2,48	chr7
MGC2408	84291	hypothetical protein MGC2408	2,39	chr3
MGC24665	116028	hypothetical protein MGC24665	2,16	chr16
MGC2477	79081	hypothetical protein MGC2477	2,06	chr11
MGC2574	79080	hypothetical protein MGC2574	2,69	chr11
MGC40168	148645	hypothetical protein MGC40168	2,52	chr1
MGC40397	121053	hypothetical protein MGC40397	2,54	chr12
MGC4172	79154	short-chain dehydrogenase/reductase	2,51	chr17
MGC4504	79094	hypothetical protein MGC4504	2,77	chr15
MGC45871	359845	hypothetical protein MGC45871	3,23	chr17
MGC5352	192111	Bcl-XL-binding protein v68	2,20	chr12
MGC5509	79074	Hypothetical protein MGC5509	2,46	chr2
MGC61571	152100	hypothetical protein MGC61571	2,24	chr3
MGST1	4257	microsomal glutathione S-transferase 1	4,03	chr12
MICB	4277	MHC class I polypeptide-related sequence B	3,46	chr6
MID1IP1	58526	MID1 interacting protein 1 (gastrulation specific G12-like (zebrafish))	2,45	chrX
MKI67IP	84365	MKI67 (FHA domain) interacting nucleolar phosphoprotein	2,04	chr2
MKKS	8195	McKusick-Kaufman syndrome	2,17	chr20
MKLN1	4289	muskelin 1, intracellular mediator containing kelch motifs	3,33	chr7
MOBK1B	55233	MOB1, Mps One Binder kinase activator-like 1B (yeast)	2,27	chr2
MOCOS	55034	molybdenum cofactor sulfurase	3,29	chr18
MON1A	84315	MON1 homolog A (yeast) /// MON1 homolog A (yeast)	2,11	chr3
MPP1	4354	membrane protein, palmitoylated 1, 55kDa	2,52	chrX
MPP6	51678	membrane protein, palmitoylated 6 (MAGUK p55 subfamily member 6)	3,16	chr7
MRGPRF	219928	MAS-related GPR, member F	2,86	chr11
MRPL11	65003	mitochondrial ribosomal protein L11	2,12	chr11
MRPL12	6182	mitochondrial ribosomal protein L12	2,31	chr17
MRPL13	28998	mitochondrial ribosomal protein L13	2,10	chr8
MRPL16	54948	mitochondrial ribosomal protein L16	2,69	chr11
MRPL17	63875	mitochondrial ribosomal protein L17	2,73	chr11
MRPL18	29074	mitochondrial ribosomal protein L18	2,04	chr6
MRPL19	9801	mitochondrial ribosomal protein L19	2,40	chr2
MRPL21	219927	mitochondrial ribosomal protein L21	2,29	chr11
MRPL30	51263	mitochondrial ribosomal protein L30	2,50	chr2
MRPL32	64983	mitochondrial ribosomal protein L32	2,72	chr7
MRPL34	64981	mitochondrial ribosomal protein L34 /// mitochondrial ribosomal protein L3	2,28	chr19
MRPL35	51318	mitochondrial ribosomal protein L35	2,74	chr2
MRPL37	51253	mitochondrial ribosomal protein L37	2,31	chr1
MRPL38	64978	mitochondrial ribosomal protein L38	2,55	chr17

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MRPL4	51073	mitochondrial ribosomal protein L4	4,23	chr19
MRPL41	64975	mitochondrial ribosomal protein L41	2,65	chr9
MRPL42	28977	mitochondrial ribosomal protein L42	2,79	chr12
MRPL43	84545	mitochondrial ribosomal protein L43 /// mitochondrial ribosomal protein L4	2,11	chr10
MRPL44	65080	mitochondrial ribosomal protein L44	2,56	chr2
MRPL50	54534	mitochondrial ribosomal protein L50	2,45	chr9
MRPL52	122704	mitochondrial ribosomal protein L52	2,37	chr14
MRPL54	116541	mitochondrial ribosomal protein L54	2,24	chr19
MRPS10	55173	mitochondrial ribosomal protein S10	3,56	chr6
MRPS12	6183	mitochondrial ribosomal protein S12	5,07	chr19
MRPS15	64960	mitochondrial ribosomal protein S15 /// mitochondrial ribosomal protein S1	2,38	chr1
MRPS16	51021	mitochondrial ribosomal protein S16	2,53	chr10
MRPS17	51373	mitochondrial ribosomal protein S17	2,81	chr7
MRPS18B	28973	mitochondrial ribosomal protein S18B	2,44	chr6
MRPS2	51116	mitochondrial ribosomal protein S2	2,21	chr9
MRPS23	51649	mitochondrial ribosomal protein S23	2,29	chr17
MRPS25	64432	mitochondrial ribosomal protein S25	3,02	chr3
MRPS28	28957	mitochondrial ribosomal protein S28	2,03	chr8
MRPS30	10884	mitochondrial ribosomal protein S30	2,36	chr5
MRPS34	65993	mitochondrial ribosomal protein S34	3,18	chr16
MRPS36	92259	mitochondrial ribosomal protein S36	2,21	chr5
MRS2L	57380	MRS2-like, magnesium homeostasis factor (S. cerevisiae)	6,54	chr6
MSH2	4436	mutS homolog 2, colon cancer, nonpolyposis type 1 (E. coli)	2,55	chr2
MT1E	4493	metallothionein 1E (functional)	5,73	chr16
MT1F	4494	metallothionein 1F (functional)	7,66	chr16
MT1G	4495	metallothionein 1G	9,40	chr16
MT1H	4496	metallothionein 1H	8,77	chr16
MT1M	4499	Metallothionein 1M	4,82	chr1
MT1X	4501	metallothionein 1X	9,12	chr16
MT2A	4502	metallothionein 2A	5,41	chr16
MTA3	57504	metastasis associated 1 family, member 3	2,74	chr2
MTAC2D1	123036	membrane targeting (tandem) C2 domain containing 1	4,93	chr14
MTAP	4507	methylthioadenosine phosphorylase	2,11	chr9
MTHFD1	4522	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1, mether	2,49	chr14
MTHFD1L	25902	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1-like	2,46	chr6
MTHFD2	10797	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, mether	2,40	chr2
MTHFS	10588	5,10-methenyltetrahydrofolate synthetase (5-formyltetrahydrofolate cyclo-	2,08	chr15
MTL5	9633	Metallothionein-like 5, testis-specific (tesmin)	2,09	chr11
MTP18	51537	mitochondrial protein 18 kDa	2,31	chr22
MTRF1	9617	mitochondrial translational release factor 1	2,08	chr13
MYBL2	4605	v-myb myeloblastosis viral oncogene homolog (avian)-like 2	2,35	chr20
MYC	4609	v-myc myelocytomatosis viral oncogene homolog (avian)	3,58	chr8
MYLIP	29116	myosin regulatory light chain interacting protein	2,07	chr6
MYO1E	4643	myosin IE	3,48	chr15
MYOZ3	91977	myozenin 3	2,35	chr5
NALP12	91662	NACHT, leucine rich repeat and PYD containing 12	2,68	chr19
NALP2	55655	NACHT, leucine rich repeat and PYD containing 2	4,67	chr19
NANOG	79923	Nanog homeobox	51,32	chr12
NANS	54187	N-acetylneuraminic acid synthase (sialic acid synthase)	2,29	chr9
NAP1L2	4674	nucleosome assembly protein 1-like 2	2,56	chrX
NAP1L3	4675	nucleosome assembly protein 1-like 3	2,03	chrX
NARG1	80155	NMDA receptor regulated 1	2,87	chr4
NBN	4683	nibrin	2,09	chr8
NCBP1	4686	nuclear cap binding protein subunit 1, 80kDa	2,44	chr9
NCBP2	22916	Nuclear cap binding protein subunit 2, 20kDa	2,33	chr3
NDUFB10	4716	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 10, 22kDa	2,22	chr16
NDUFB7	4713	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 7, 18kDa	2,20	chr19
NDUFS7	374291	NADH dehydrogenase (ubiquinone) Fe-S protein 7, 20kDa (NADH-coenz	2,87	chr19
NDUFS8	4728	NADH dehydrogenase (ubiquinone) Fe-S protein 8, 23kDa (NADH-coenz	2,44	chr11
NDUFV2	4729	NADH dehydrogenase (ubiquinone) flavoprotein 2, 24kDa	2,37	chr18
NEDD4L	23327	neural precursor cell expressed, developmentally down-regulated 4-like	2,30	chr18
NEFH	4744	neurofilament, heavy polypeptide 200kDa	3,99	chr22
NEFL	4747	neurofilament, light polypeptide 68kDa	3,21	chr8
NETO1	81832	neuropilin (NRP) and tolloid (TLL)-like 1	3,92	chr18
NFATC2IP	84901	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 in	2,62	chr16
NFE2L3	9603	nuclear factor (erythroid-derived 2)-like 3	8,22	chr7

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NFIX	4784	nuclear factor I/X (CCAAT-binding transcription factor)	2,76	chr19
NFYB	4801	nuclear transcription factor Y, beta	2,84	chr3
NHP2L1	4809	NHP2 non-histone chromosome protein 2-like 1 (S. cerevisiae)	2,13	chr22
NIFIE14	10430	seven transmembrane domain protein	2,43	chr19
NLE1	54475	notchless homolog 1 (Drosophila)	3,25	chr17
NLGN4X	57502	neuroligin 4, X-linked	2,30	chrX
NLK	51701	nemo like kinase	2,17	chr17
NLN	57486	neurolysin (metallopeptidase M3 family)	3,20	chr5
NMB	4828	neuromedin B	2,09	chr15
NME3	4832	non-metastatic cells 3, protein expressed in	2,45	chr16
NMI	9111	N-myc (and STAT) interactor	11,10	chr2
NMT1	4836	N-myristoyltransferase 1	2,10	chr17
NMU	10874	neuromedin U	6,95	chr4
NOB1P	28987	nin one binding protein	2,56	chr4
NODAL	4838	nodal homolog (mouse)	9,78	chr10
NOL11	25926	nucleolar protein 11	2,02	chr17
NOL5A	10528	nucleolar protein 5A (56kDa with KKE/D repeat)	2,00	chr20
NOL7	51406	Nucleolar protein 7, 27kDa	2,03	chr6
NOLA3	55505	nucleolar protein family A, member 3 (H/ACA small nucleolar RNPs)	2,14	chr15
NOLC1	9221	nucleolar and coiled-body phosphoprotein 1	3,02	chr10
NOM1	64434	nucleolar protein with MIF4G domain 1	2,66	chr7
NP	4860	nucleoside phosphorylase	3,62	chr14
NPM3	10360	nucleophosmin/nucleoplasmin, 3	2,94	chr10
NPTX1	4884	neuronal pentraxin I	4,53	chr17
NPTX2	4885	neuronal pentraxin II	2,15	chr7
NQO2	4835	NAD(P)H dehydrogenase, quinone 2	2,08	chr6
NR5A2	2494	nuclear receptor subfamily 5, group A, member 2	2,42	chr1
NRBF2	29982	nuclear receptor binding factor 2	2,37	chr8
NSBP1	79366	nucleosomal binding protein 1	3,04	chrX
NSD1	64324	nuclear receptor binding SET domain protein 1	2,37	chr5
NSFL1C	55968	NSFL1 (p97) cofactor (p47)	2,06	chr20
NTHL1	4913	nth endonuclease III-like 1 (E. coli)	2,58	chr16
NTS	4922	neurotensin	4,45	chr12
NUDT1	4521	nudix (nucleoside diphosphate linked moiety X)-type motif 1	2,29	chr7
NUDT15	55270	nudix (nucleoside diphosphate linked moiety X)-type motif 15	2,62	chr13
NUDT21	11051	nudix (nucleoside diphosphate linked moiety X)-type motif 21	4,50	chr16
NUDT22	84304	nudix (nucleoside diphosphate linked moiety X)-type motif 22 /// nudix (nuc	2,00	chr11
NUP50	10762	nucleoporin 50kDa	2,36	chr22
NUP88	4927	nucleoporin 88kDa	2,17	chr17
OACT1	154141	O-acyltransferase (membrane bound) domain containing 1	3,41	chr6
OAT	4942	ornithine aminotransferase (gyrate atrophy)	2,41	chr10
OAZ1	4946	ornithine decarboxylase antizyme 1	2,22	chr2
OAZ2	4947	ornithine decarboxylase antizyme 2	2,48	chr15
OGDHL	55753	oxoglutarate dehydrogenase-like	3,01	chr10
OIP5	11339	Opa interacting protein 5	2,01	chr15
OLFM1	10439	olfactomedin 1	2,61	chr9
OMA1	115209	OMA1 homolog, zinc metallopeptidase (S. cerevisiae)	3,24	chr1
ORC1L	4998	origin recognition complex, subunit 1-like (yeast)	2,54	chr1
OSBPL10	114884	oxysterol binding protein-like 10	5,40	chr3
OSTM1	28962	osteopetrosis associated transmembrane protein 1	2,15	chr6
OTUD6B	51633	OTU domain containing 6B	2,10	chr8
OVOL1	5017	ovo-like 1(Drosophila)	2,02	chr11
OVOL2	58495	ovo-like 2 (Drosophila) /// ovo-like 2 (Drosophila)	4,95	chr20
P2RX5	5026	purinergic receptor P2X, ligand-gated ion channel, 5	2,62	chr17
PACSIN1	29993	protein kinase C and casein kinase substrate in neurons 1	2,63	chr6
PAH	5053	phenylalanine hydroxylase	2,33	chr12
PAICS	10606	phosphoribosylaminoimidazole carboxylase, phosphoribosylaminoimidazo	2,09	chr4
PAK1	5058	p21/Cdc42/Rac1-activated kinase 1 (STE20 homolog, yeast)	3,44	chr11
PAK1IP1	55003	PAK1 interacting protein 1	2,71	chr6
PAPD1	55149	PAP associated domain containing 1	2,13	chr10
PAPSS2	9060	3'-phosphoadenosine 5'-phosphosulfate synthase 2	4,71	chr10
PAQR5	54852	progestin and adipoQ receptor family member V	2,02	chr15
PARD6A	50855	par-6 partitioning defective 6 homolog alpha (C.elegans)	2,07	chr16
PARP12	64761	poly (ADP-ribose) polymerase family, member 12	4,74	chr7
PAWR	5074	PRKC, apoptosis, WT1, regulator	2,91	chr20
PBP	5037	prostatic binding protein	2,19	chr12

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PBX1	5087	Pre-B-cell leukemia transcription factor 1	3,32	chr1
PCBD2	84105	6-pyruvoyl-tetrahydropterin synthase/dimerization cofactor of hepatocyte r	3,20	chr5
PCMT1	5110	protein-L-isoaspartate (D-aspartate) O-methyltransferase	2,11	chr6
PCNXL2	80003	Pecanex-like 2 (Drosophila)	2,72	chr1
PCSK9	255738	proprotein convertase subtilisin/kexin type 9	5,11	chr1
PCYT1B	9468	phosphate cytidylyltransferase 1, choline, beta	2,95	chrX
PDAP1	11333	PDGFA associated protein 1	2,68	chr5
PDCD10	11235	programmed cell death 10	2,22	chr3
PDCL3	285359 /// 79031	phosducin-like 3 /// hypothetical protein FLJ12205	2,45	chr2
PDF	64146 /// 84342	peptide deformylase-like protein /// component of oligomeric golgi complex	2,00	chr16
PDGFA	5154	platelet-derived growth factor alpha polypeptide	2,76	chr7_random
PDHB	5162	pyruvate dehydrogenase (lipoamide) beta	2,05	chr3
PDIA5	10954	protein disulfide isomerase family A, member 5	2,69	chr3
PDK3	5165	pyruvate dehydrogenase kinase, isoenzyme 3	3,03	chrX
PDLIM1	9124	PDZ and LIM domain 1 (elfin)	4,00	chr10
PDPN	10630	podoplanin	5,95	chr1
PDZK3	23037	PDZ domain containing 3	2,53	chr5
PDZK4	57595	PDZ domain containing 4	3,94	chrX
PERP	64065	PERP, TP53 apoptosis effector	2,59	chr6
PFDN4	5203	prefoldin 4	2,19	chr20
PFN1	5216	profilin 1	2,55	chr1
PGBD5	79605	piggyBac transposable element derived 5	2,80	chr1
PGK1	5230	phosphoglycerate kinase 1	2,00	chrX
PGM2L1	283209	phosphoglucomutase 2-like 1	2,22	chr11
PGRMC1	10857	progesterone receptor membrane component 1	2,19	chrX
PHB	5245	prohibitin	2,28	chr16
PHC1	1911	polyhomeotic-like 1 (Drosophila)	6,36	chr12
PHF15	23338	PHD finger protein 15	5,66	chr5
PHF17	79960	PHD finger protein 17	2,69	chr4
PHF19	26147	PHD finger protein 19	2,96	chr9
PHLDA1	22822	Pleckstrin homology-like domain, family A, member 1	3,12	chr12
PIAS2	9063	Protein inhibitor of activated STAT, 2	2,70	chr18
PIGW	284098	phosphatidylinositol glycan, class W	2,24	chr17
PIK3CB	5291	phosphoinositide-3-kinase, catalytic, beta polypeptide	2,18	chr3
PIK3CD	5293	phosphoinositide-3-kinase, catalytic, delta polypeptide /// phosphoinositide	2,83	chr1
PIM2	11040	pim-2 oncogene	3,86	chrX
PINK1	65018	PTEN induced putative kinase 1	2,16	chr1
PINX1	54984	PIN2-interacting protein 1	2,33	chr8
PIP5K2A	5305	Phosphatidylinositol-4-phosphate 5-kinase, type II, alpha	2,60	chr10
PIPOX	51268	pipecolic acid oxidase	2,96	chr17
PITPNC1	26207	phosphatidylinositol transfer protein, cytoplasmic 1	3,76	chr17
PKIB	5570	protein kinase (cAMP-dependent, catalytic) inhibitor beta	2,69	chr6
PLA2G12A	81579	phospholipase A2, group XIIA /// phospholipase A2, group XIIA	2,71	chr1
PLAA	9373	phospholipase A2-activating protein	2,01	chr9
PLS1	5357	plastin 1 (I isoform)	2,30	chr3
PLSCR1	5359	phospholipid scramblase 1	3,01	chr3
PMAIP1	5366	phorbol-12-myristate-13-acetate-induced protein 1	31,01	chr18
PMM2	5373	phosphomannomutase 2	2,15	chr16
PODXL	5420	podocalyxin-like	4,34	chr7
POLE4	56655	polymerase (DNA-directed), epsilon 4 (p12 subunit)	2,16	chr2
POLR1A	25885	polymerase (RNA) I polypeptide A, 194kDa	2,36	chr2
POLR1B	84172	polymerase (RNA) I polypeptide B, 128kDa	2,93	chr2
POLR1D	51082	polymerase (RNA) I polypeptide D, 16kDa	2,58	chr13
POLR2E	5434	polymerase (RNA) II (DNA directed) polypeptide E, 25kDa	2,17	chr19
POLR2F	5435	polymerase (RNA) II (DNA directed) polypeptide F	2,39	chr22
POLR2I	5438	polymerase (RNA) II (DNA directed) polypeptide I, 14.5kDa	2,27	chr19
POLR2L	5441	polymerase (RNA) II (DNA directed) polypeptide L, 7.6kDa /// polymerase	2,14	chr11
POLR3D	661	polymerase (RNA) III (DNA directed) polypeptide D, 44kDa	2,16	chr8
POLR3G	10622	Polymerase (RNA) III (DNA directed) polypeptide G (32kD)	11,89	chr5
POLR3K	51728	polymerase (RNA) III (DNA directed) polypeptide K, 12.3 kDa	3,17	chr16
POLRMT	5442	polymerase (RNA) mitochondrial (DNA directed)	2,19	chr17
POP7	10248	processing of precursor 7, ribonuclease P subunit (S. cerevisiae)	2,16	chr7
POR	5447	P450 (cytochrome) oxidoreductase	2,41	chr7
POU5F1	1628 /// 5460 /// 5	POU domain, class 5, transcription factor 1 /// POU domain, class 5, trans	32,05	chr1
PPAN	56342	peter pan homolog (Drosophila)	2,06	chr19
PPAP2A	8611	phosphatidic acid phosphatase type 2A	3,05	chr5

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PPAP2C	8612	phosphatidic acid phosphatase type 2C	8,09	chr19
PPCDC	60490	phosphopantothenoylcysteine decarboxylase	2,41	chr15
PPGB	5476	protective protein for beta-galactosidase (galactosialidosis)	2,34	chr20
PPHLN1	51535	periphilin 1	2,25	chr12
PPID	5481	peptidylprolyl isomerase D (cyclophilin D)	3,51	chr4
PPM1B	5495	protein phosphatase 1B (formerly 2C), magnesium-dependent, beta isofo	2,75	chr2
PPM1H	57460	protein phosphatase 1H (PP2C domain containing)	2,85	chr12
PPM1J	333926	protein phosphatase 1J (PP2C domain containing)	2,79	chr1
PPP1R14A	94274	protein phosphatase 1, regulatory (inhibitor) subunit 14A	3,61	chr19
PPP1R14B	26472	protein phosphatase 1, regulatory (inhibitor) subunit 14B	3,17	chr22
PPP1R16B	26051	protein phosphatase 1, regulatory (inhibitor) subunit 16B	4,22	chr20
PPP2R1B	5519	protein phosphatase 2 (formerly 2A), regulatory subunit A (PR 65), beta is	3,50	chr11
PPP2R5A	5525	protein phosphatase 2, regulatory subunit B (B56), alpha isoform	2,67	chr1
PPP6C	5537	Protein phosphatase 6, catalytic subunit	2,01	chr9
PQBP1	10084	polyglutamine binding protein 1	2,05	chrX
PQLC3	130814	PQ loop repeat containing 3	3,76	chr2
PRDM14	63978	PR domain containing 14	9,93	chr8
PRDX6	9588	peroxiredoxin 6	2,01	chr1
PREPL	9581	prolyl endopeptidase-like	2,04	chr2
PRKAA1	5562	protein kinase, AMP-activated, alpha 1 catalytic subunit	2,02	chr5
PRKAB2	5565	protein kinase, AMP-activated, beta 2 non-catalytic subunit	2,79	chr1
PRKAR1B	5575	Protein kinase, cAMP-dependent, regulatory, type I, beta	4,38	chr21
PRKAR2B	5577	protein kinase, cAMP-dependent, regulatory, type II, beta	2,13	chr7
PRKCB1	5579	protein kinase C, beta 1	2,74	chr16
PRKCQ	5588	protein kinase C, theta	3,08	chr10
PRO0149	29035	PRO0149 protein	2,19	chr16
PRO1843	55378	hypothetical protein PRO1843	2,53	chr3
PRO1853	55471	hypothetical protein PRO1853	2,39	chr2
PROCR	10544	protein C receptor, endothelial (EPCR)	3,03	chr20
PRODH	5625	proline dehydrogenase (oxidase) 1	4,03	chr22
PRPF38A	84950	PRP38 pre-mRNA processing factor 38 (yeast) domain containing A	2,04	chr1
PRPS1	5631	phosphoribosyl pyrophosphate synthetase 1	3,07	chrX
PRPS2	5634	Phosphoribosyl pyrophosphate synthetase 2	2,43	chrX
PRSS16	10279	protease, serine, 16 (thymus)	2,62	chr6
PRSS8	5652	protease, serine, 8 (prostasin)	2,07	chr16
PSMA5	5686	proteasome (prosome, macropain) subunit, alpha type, 5	2,29	chr1
PSMB10	5699	proteasome (prosome, macropain) subunit, beta type, 10	3,64	chr16
PSMB8	5696	proteasome (prosome, macropain) subunit, beta type, 8 (large multifunctio	7,99	chr6
PSMC4	5704	proteasome (prosome, macropain) 26S subunit, ATPase, 4	3,13	chr19
PSMD12	5718	proteasome (prosome, macropain) 26S subunit, non-ATPase, 12	2,33	chr17
PSME1	5720	proteasome (prosome, macropain) activator subunit 1 (PA28 alpha)	2,57	chr14
PSME2	5721	proteasome (prosome, macropain) activator subunit 2 (PA28 beta)	2,36	chr5
PSME3	10197	proteasome (prosome, macropain) activator subunit 3 (PA28 gamma; Ki)	2,65	chr17
PSMF1	9491	proteasome (prosome, macropain) inhibitor subunit 1 (PI31)	2,65	chr20
PSPH	5723	phosphoserine phosphatase	2,01	chr7
PTCHD1	139411	patched domain containing 1	2,11	chrX
PTEN	5728	Phosphatase and tensin homolog (mutated in multiple advanced cancers	2,12	chr10
PTK9L	11344	PTK9L protein tyrosine kinase 9-like (A6-related protein)	2,27	chr3
PTMA	5757	prothymosin, alpha (gene sequence 28)	2,06	chr2
PTPN2	5771	protein tyrosine phosphatase, non-receptor type 2	2,19	chr13
PTPN6	5777	protein tyrosine phosphatase, non-receptor type 6	2,85	chr12
PUS1	80324	pseudouridylate synthase 1	2,18	chr12
PWP2H	5822	PWP2 periodic tryptophan protein homolog (yeast)	2,23	chr21
PX19	27166	px19-like protein	3,05	chr1
PYCARD	29108	PYD and CARD domain containing	8,35	chr16
PYCR2	29920	pyrroline-5-carboxylate reductase family, member 2	2,95	chr1
QRSL1	55278	glutaminyl-tRNA synthase (glutamine-hydrolyzing)-like 1	2,31	chr6
RAB10	10890	RAB10, member RAS oncogene family	2,15	chr2
RAB11FIP4	84440	RAB11 family interacting protein 4 (class II)	2,81	chr17
RAB15	376267	RAB15, member RAS onocogene family	2,16	chr14
RAB20	55647	RAB20, member RAS oncogene family	4,17	chr13
RAB34	83871	RAB34, member RAS oncogene family	3,47	chr17
RAB38	23682	RAB38, member RAS oncogene family	2,10	chr11
RAB39B	116442	RAB39B, member RAS oncogene family	2,19	chrX
RAB3B	5865	RAB3B, member RAS oncogene family	2,14	chr1
RAB5A	5868	RAB5A, member RAS oncogene family	2,20	chr3

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RAB7	7879	RAB7, member RAS oncogene family	2,08	chr3
RABAC1	10567	Rab acceptor 1 (prenylated)	2,00	chr19
RABEPK	10244	Rab9 effector protein with kelch motifs	2,16	chr9
RABGAP1L	9910	RAB GTPase activating protein 1-like	9,92	chr1
RALA	5898	v-ral simian leukemia viral oncogene homolog A (ras related)	2,68	chr7
RALGPS1	9649	Ral GEF with PH domain and SH3 binding motif 1	2,13	chr9
RARRES2	5919	retinoic acid receptor responder (tazarotene induced) 2	14,87	chr7
RASEF	158158	RAS and EF-hand domain containing	2,05	chr9
RASGEF1A	221002	RasGEF domain family, member 1A	3,22	chr10
RASGRP2	10235	RAS guanyl releasing protein 2 (calcium and DAG-regulated)	2,89	chr11
RASIP1	54922	Ras interacting protein 1	2,05	chr19
RASL11B	65997	RAS-like, family 11, member B	5,59	chr4
RBBP7	5931	Retinoblastoma binding protein 7	2,34	chrX
RBM13	84549	RNA binding motif protein 13 /// RNA binding motif protein 13	2,01	chr8
RBM15	64783	RNA binding motif protein 15	2,33	chr1
RBM19	9904	RNA binding motif protein 19	2,40	chr12
RBM35A	54845	RNA binding motif protein 35A	13,21	chr8
RBM35B	80004	RNA binding motif protein 35B	3,72	chr16
RBM7	10179	RNA binding motif protein 7	2,76	chr11
RBP7	116362	retinol binding protein 7, cellular	2,23	chr1
RBPMS	11030	RNA binding protein with multiple splicing	3,46	chr8
RBPMS2	348093	RNA binding protein with multiple splicing 2	4,02	chr15
RBPSUH	3516	recombining binding protein suppressor of hairless (Drosophila)	2,64	chr4
RCC1	1104	regulator of chromosome condensation 1	2,01	chr1
RCHY1	25898	ring finger and CHY zinc finger domain containing 1	2,21	chr4
RCN3	57333	reticulocalbin 3, EF-hand calcium binding domain	2,75	chr19
RENT1	5976	regulator of nonsense transcripts 1	2,27	chr19
REXO2	25996	REX2, RNA exonuclease 2 homolog (S. cerevisiae)	3,49	chr11
RIS1	25907	Ras-induced senescence 1	5,18	chr3
RNF12	51132	ring finger protein 12	2,14	chr15
RNF125	54941	ring finger protein 125	3,83	chr18
RNF126	55658	ring finger protein 126	2,03	chr19
RNF138	51444	ring finger protein 138	2,63	chr18
RNU3IP2	9136	RNA, U3 small nucleolar interacting protein 2	3,17	chr3
RP1-112K5.2	90121	hypothetical protein DT1P1A10	2,16	chrX
RPE	6120	ribulose-5-phosphate-3-epimerase	2,34	chr2
RPE	440001 /// 6120	ribulose-5-phosphate-3-epimerase /// similar to Ribulose-phosphate 3-epi	2,75	chr10
RPL22L1	200916	ribosomal protein L22-like 1	2,52	chr3
RPL36AL	6166	ribosomal protein L36a-like	2,25	chr5
RPRM	56475	reprimo, TP53 dependant G2 arrest mediator candidate	2,30	chr2
RPS24	6229	Ribosomal protein S24	2,96	chr10
RPS27L	51065	Ribosomal protein S27-like	2,01	chr15
RPS6KA1	6195	ribosomal protein S6 kinase, 90kDa, polypeptide 1	2,35	chr1
RPUSD2	27079	RNA pseudouridylate synthase domain containing 2	2,27	chr15
RRAS2	22800	related RAS viral (r-ras) oncogene homolog 2	4,73	chr1
RRBP1	6238	ribosome binding protein 1 homolog 180kDa (dog)	3,21	chr20
RRM2B	50484	ribonucleotide reductase M2 B (TP53 inducible)	2,36	chr8
RRS1	23212	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)	2,69	chr8
RSL1D1	26156	Ribosomal L1 domain containing 1	2,18	chr16
RSU1	6251	Ras suppressor protein 1	2,11	chr10
RTN4IP1	84816	reticulon 4 interacting protein 1	3,90	chr12
SACM1L	22908	SAC1 suppressor of actin mutations 1-like (yeast)	2,03	chr3
SAMD6	203286	sterile alpha motif domain containing 6	2,51	chr9
SAMHD1	25939	SAM domain and HD domain 1	9,21	chr20
SAP18	10284	sin3-associated polypeptide, 18kDa	3,13	chr13
SAS10	57050	disrupter of silencing 10	2,05	chr4
SAV1	60485	salvador homolog 1 (Drosophila)	2,03	chr14
SCAMP1	9522	secretory carrier membrane protein 1	2,06	chr5
SCAMP5	192683	secretory carrier membrane protein 5	2,02	chr15
SCAND1	51282	SCAN domain containing 1	2,37	chr20
SCARB1	949	scavenger receptor class B, member 1	2,49	chr12
SCD	6319	stearoyl-CoA desaturase (delta-9-desaturase) /// stearoyl-CoA desaturase	2,89	chr10
SCG3	29106	secretogranin III	12,46	chr15
SCGB3A2	117156	secretoglobin, family 3A, member 2	10,13	chr5
SCLY	51540	selenocysteine lyase	3,66	chr2
SCNN1A	6337	sodium channel, nonvoltage-gated 1 alpha	12,10	chr12

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SCNN1G	6340	sodium channel, nonvoltage-gated 1, gamma	2,24	chr16
SCO1	6341	SCO cytochrome oxidase deficient homolog 1 (yeast)	2,06	chr17
SCO2	9997	SCO cytochrome oxidase deficient homolog 2 (yeast)	2,04	chr22
SCP2	6342	Sterol carrier protein 2	2,01	chr1
SDHB	6390	succinate dehydrogenase complex, subunit B, iron sulfur (Ip)	3,40	chr1
SDHD	6392	succinate dehydrogenase complex, subunit D, integral membrane protein	2,92	chr1
SEC11L3	90701	SEC11-like 3 (S. cerevisiae)	2,19	chr18
SEC22L3	9117	SEC22 vesicle trafficking protein-like 3 (S. cerevisiae) /// SEC22 vesicle tra	2,79	chr3
SEC24D	9871	SEC24 related gene family, member D (S. cerevisiae)	2,89	chr4
SEC5L1	55770	SEC5-like 1 (S. cerevisiae)	2,21	chr6
SEH1L	81929	SEH1-like (S. cerevisiae)	2,13	chr18
SELT	51714	selenoprotein T	2,03	chr3
SEMA6A	57556	sema domain, transmembrane domain (TM), and cytoplasmic domain, (se	2,25	chr5
SENP2	59343	SUMO1/sentrin/SMT3 specific peptidase 2	2,03	chr3
SEPHS1	22929	Selenophosphate synthetase 1	7,65	chr2
SERF1A	56617 /// 8293	small EDRK-rich factor 1A (telomeric) /// small EDRK-rich factor 1B (centro	2,09	chr5
SERF2	10169	small EDRK-rich factor 2	2,06	chr15
SERF2	10169 /// 25764	small EDRK-rich factor 2 /// Huntingtin interacting protein K	2,41	chr15
SERP1	27230	stress-associated endoplasmic reticulum protein 1	2,05	chr3
SERPINB9	5272	serpin peptidase inhibitor, clade B (ovalbumin), member 9	2,01	chr6
SERPINE2	5270	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor t	2,34	chr2
SERPINI1	5274	serpin peptidase inhibitor, clade I (neuroserpin), member 1	3,43	chr3
SET	389168 /// 6418	SET translocation (myeloid leukemia-associated) /// similar to SET protein	3,25	chrX
SFRS2	6427	splicing factor, arginine/serine-rich 2	2,21	chr17
SFT2D1	113402	SFT2 domain containing 1	2,78	chr6
SGK	6446	serum/glucocorticoid regulated kinase	4,88	chr6
SGK3	23678	serum/glucocorticoid regulated kinase family, member 3	2,52	chr8
SH3GL2	6456	SH3-domain GRB2-like 2	2,63	chr9
SHANK2	22941	SH3 and multiple ankyrin repeat domains 2	2,64	chr11
SHMT2	6472	serine hydroxymethyltransferase 2 (mitochondrial)	2,23	chr12
SIGIRR	59307	single immunoglobulin and toll-interleukin 1 receptor (TIR) domain	3,49	chr11
SIPA1L1	26037	signal-induced proliferation-associated 1 like 1	2,03	chr14
SIRT1	23411	sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisia	4,58	chr10
SITPEC	51295	signaling intermediate in Toll pathway, evolutionarily conserved	2,23	chr19
SIVA	10572	CD27-binding (Siva) protein	2,30	chr14
SKIL	6498	SKI-like	4,29	chr3
SKP2	6502	S-phase kinase-associated protein 2 (p45)	2,29	chr5
SLC12A8	84561	solute carrier family 12 (potassium/chloride transporters), member 8	2,72	chr3
SLC13A3	64849	solute carrier family 13 (sodium-dependent dicarboxylate transporter), me	2,03	chr20
SLC16A1	6566	solute carrier family 16 (monocarboxylic acid transporters), member 1	3,59	chr1
SLC16A10	117247	solute carrier family 16 (monocarboxylic acid transporters), member 10	3,47	chr6
SLC18A2	6571	Solute carrier family 18 (vesicular monoamine), member 2	2,02	chr10
SLC1A5	6510	solute carrier family 1 (neutral amino acid transporter), member 5	2,28	chr19
SLC25A19	60386	solute carrier family 25 (mitochondrial deoxynucleotide carrier), member 1	3,14	chr17
SLC25A21	89874	solute carrier family 25 (mitochondrial oxodicarboxylate carrier), member 2	2,27	chr14
SLC25A4	291	solute carrier family 25 (mitochondrial carrier; adenine nucleotide transloca	3,22	chr4
SLC27A2	11001	solute carrier family 27 (fatty acid transporter), member 2	2,29	chr15
SLC27A3	11000	solute carrier family 27 (fatty acid transporter), member 3	2,88	chr1
SLC37A1	54020	solute carrier family 37 (glycerol-3-phosphate transporter), member 1	2,49	chr21
SLC38A5	92745	solute carrier family 38, member 5	2,53	chrX
SLC39A1	27173	solute carrier family 39 (zinc transporter), member 1	2,07	chr1
SLC39A14	23516	solute carrier family 39 (zinc transporter), member 14	2,95	chr8
SLC39A8	64116	solute carrier family 39 (zinc transporter), member 8	2,75	chr4
SLC43A1	8501	solute carrier family 43, member 1	2,87	chr11
SLC44A1	23446	solute carrier family 44, member 1	3,12	chr9
SLC4A11	83959	solute carrier family 4, sodium bicarbonate transporter-like, member 11	4,80	chr20
SLC4A5	57835	Solute carrier family 4, sodium bicarbonate cotransporter, member 5	2,17	chr2
SLC7A3	84889	solute carrier family 7 (cationic amino acid transporter, y+ system), memb	6,00	chrX
SLCO4A1	28231	solute carrier organic anion transporter family, member 4A1	2,77	chr20
SLCO4C1	353189	solute carrier organic anion transporter family, member 4C1	4,54	chr5
SMC6L1	79677	SMC6 structural maintenance of chromosomes 6-like 1 (yeast)	2,05	chr2
SMILE	160418	SMILE protein	2,14	chr12
SMN1	6606 /// 6607	survival of motor neuron 1, telomeric /// survival of motor neuron 2, centro	2,16	chr5
SMPDL3B	27293	sphingomyelin phosphodiesterase, acid-like 3B	5,26	chr1
SNRPC	6631	small nuclear ribonucleoprotein polypeptide C	2,02	chr5
SNRPN	6638 /// 8926	small nuclear ribonucleoprotein polypeptide N /// SNRPN upstream readin	5,38	chr15

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SNRPN	6638	Small nuclear ribonucleoprotein polypeptide N	4,20	chr15
SNX5	27131	sorting nexin 5	2,03	chr20
SOCS1	8651	suppressor of cytokine signaling 1	3,51	chr16
SOD2	6648	superoxide dismutase 2, mitochondrial	3,16	chr6
SORBS1	10580	sorbin and SH3 domain containing 1	3,46	chr10
SORL1	6653	sortilin-related receptor, L(DLR class) A repeats-containing	2,41	chr11
SP110	3431	SP110 nuclear body protein	2,15	chr2
SPATA11	84266	spermatogenesis associated 11	2,05	chr19
SPBC25	57405	spindle pole body component 25 homolog (S. cerevisiae)	2,14	chr2
SPG20	23111	spastic paraplegia 20, spartin (Troyer syndrome)	2,62	chr13
SPIB	6689	Spi-B transcription factor (Spi-1/PU.1 related) /// Spi-B transcription factor	2,73	chr19
SPINT1	6692	serine peptidase inhibitor, Kunitz type 1	4,77	chr15
SPINT2	10653	serine peptidase inhibitor, Kunitz type, 2	2,18	chr19
SPRY4	81848	Sprouty homolog 4 (Drosophila)	5,13	chr11
SPSB2	84727	splA/ryanodine receptor domain and SOCS box containing 2	2,17	chr12
SPTLC2	9517	serine palmitoyltransferase, long chain base subunit 2	2,91	chr14
SRD5A1	6715	steroid-5-alpha-reductase, alpha polypeptide 1 (3-oxo-5 alpha-steroid delt	2,15	chr5
SRM	6723	spermidine synthase	2,48	chr1
SRPRB	58477	signal recognition particle receptor, B subunit	2,18	chr3
SRY	6736	sex determining region Y	2,02	chrY
SSNA1	8636	Sjogren's syndrome nuclear autoantigen 1	2,21	chr9
SSR1	6745	Signal sequence receptor, alpha (translocon-associated protein alpha)	2,24	chr6
SSR3	6747	signal sequence receptor, gamma (translocon-associated protein gamma	2,11	chr3
SSSCA1	10534	Sjogren's syndrome/scleroderma autoantigen 1	2,31	chr11
SSU72	29101	Ssu72 RNA polymerase II CTD phosphatase homolog (yeast)	2,11	chr1
ST14	6768	suppression of tumorigenicity 14 (colon carcinoma, matriptase, epithin)	2,03	chr11
ST8SIA3	51046	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 3	2,36	chr18
STAT3	6774	signal transducer and activator of transcription 3 (acute-phase response f	3,17	chr17
STC2	8614	stanniocalcin 2	3,44	chr5
STEAP1	26872	six transmembrane epithelial antigen of the prostate 1	3,08	chr7
STEAP2	261729	six transmembrane epithelial antigen of the prostate 2	2,72	chr7
STEAP3	55240	STEAP family member 3	3,37	chr2
STIP1	10963	stress-induced-phosphoprotein 1 (Hsp70/Hsp90-organizing protein)	2,17	chr11
STMN3	50861	stathmin-like 3	4,51	chr20
STRBP	55342	Spermatid perinuclear RNA binding protein	2,09	chr9
STRN	6801	Striatin, calmodulin binding protein	2,41	chr2
STX6	10228	syntaxin 6	2,42	chr1
SUB1	10923	SUB1 homolog (S. cerevisiae)	2,47	chr5
SUGT1	10910	SGT1, suppressor of G2 allele of SKP1 (S. cerevisiae)	2,02	chr13
SUPT3H	8464	suppressor of Ty 3 homolog (S. cerevisiae)	2,19	chr6
SURB7	9412	SRB7 suppressor of RNA polymerase B homolog (yeast)	2,88	chr12
SURF4	6836	surfeit 4	2,70	chr9
SWAP70	23075	SWAP-70 protein	2,21	chr11
SYAP1	94056	synapse associated protein 1, SAP47 homolog (Drosophila)	2,15	chrX
SYNCRIP	10492	synaptotagmin binding, cytoplasmic RNA interacting protein	3,18	chr20
SYPL1	6856	synaptophysin-like 1	2,46	chr7
SYT6	148281	synaptotagmin VI	3,29	chr1
TACSTD1	4072	tumor-associated calcium signal transducer 1	4,44	chr2
TAF12	6883	TAF12 RNA polymerase II, TATA box binding protein (TBP)-associated fa	2,08	chr1
TAF4B	6875	TAF4b RNA polymerase II, TATA box binding protein (TBP)-associated fa	2,93	chr18
TAF5L	27097	TAF5-like RNA polymerase II, p300/CBP-associated factor (PCAF)-assoc	2,11	chr1
TALDO1	6888	transaldolase 1	2,42	chr11
TAP1	6890	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	4,51	chr6
TAP2	6891	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)	4,37	chr6
TARS	6897	threonyl-tRNA synthetase	3,28	chr5
TBC1D23	55773	TBC1 domain family, member 23	2,68	chr3
TBC1D4	9882	TBC1 domain family, member 4	2,13	chr13
TBC1D8	11138	TBC1 domain family, member 8 (with GRAM domain)	2,75	chr2
TBCC	6903	tubulin-specific chaperone c	2,02	chr6
TBCE	6905	tubulin-specific chaperone e	2,04	chr1
TBRG4	9238	transforming growth factor beta regulator 4	2,67	chr7
TCEB3	6924	transcription elongation factor B (SIII), polypeptide 3 (110kDa, elongin A)	2,52	chr1
TCF7L1	83439	transcription factor 7-like 1 (T-cell specific, HMG-box) /// transcription facto	2,14	chr2
TCFL5	10732	Transcription factor-like 5 (basic helix-loop-helix)	2,26	chr20
TDGF1	6997	teratocarcinoma-derived growth factor 1	45,48	chr3
TDRKH	11022	tudor and KH domain containing	2,02	chr1

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Gene Symbol	Entrez Gene	Gene Title	NPC_down	Chromosome Number(Avadis)
TEAD4	7004	TEA domain family member 4	5,14	chr12
TEGT	7009	testis enhanced gene transcript (BAX inhibitor 1)	2,05	chr12
TERF1	7013	telomeric repeat binding factor (NIMA-interacting) 1	10,42	chr8
TEX15	56154	testis expressed sequence 15	2,17	chr8
TFB1M	51106	transcription factor B1, mitochondrial	2,59	chr6
TFDP2	7029	Transcription factor Dp-2 (E2F dimerization partner 2)	2,27	chr3
TFRC	7037	transferrin receptor (p90, CD71)	2,69	chr3
THAP11	57215	THAP domain containing 11	2,01	chr16
THAP4	51078	THAP domain containing 4	2,03	chr2_random
THBS2	7058	thrombospondin 2	5,05	chr6
THEM2	55856	thioesterase superfamily member 2	4,10	chr6
THOC4	10189	THO complex 4	2,15	chr17_random
THY1	7070	Thy-1 cell surface antigen	5,02	chr11
THY28	29087	thymocyte protein thy28	2,63	chr11
TIGD7	91151	tigger transposable element derived 7 /// tigger transposable element deri	2,36	chr16
TIMM13	26517	translocase of inner mitochondrial membrane 13 homolog (yeast)	2,71	chr19
TIMM22	29928	translocase of inner mitochondrial membrane 22 homolog (yeast)	2,01	chr17
TIMM50	92609	translocase of inner mitochondrial membrane 50 homolog (yeast)	2,32	chr19
TIMM8A	1678	translocase of inner mitochondrial membrane 8 homolog A (yeast)	2,20	chr2
TIMM8B	26521	translocase of inner mitochondrial membrane 8 homolog B (yeast)	2,04	chr11
TIMP4	7079	TIMP metallopeptidase inhibitor 4	2,96	chr3
TJP2	9414	tight junction protein 2 (zona occludens 2)	2,06	chr9
TKT	7086	transketolase (Wernicke-Korsakoff syndrome)	5,33	chr3
TLE2	7089	transducin-like enhancer of split 2 (E(sp1) homolog, Drosophila)	3,41	chr19
TMED2	10959	transmembrane emp24 domain trafficking protein 2	2,35	chr12
TMED5	50999	transmembrane emp24 protein transport domain containing 5	2,53	chr1
TMEM11	8834	transmembrane protein 11	2,04	chr17
TMEM23	259230	transmembrane protein 23	3,59	chr10
TMEM28	27112	transmembrane protein 28	2,27	chrX
TMEM30B	161291	transmembrane protein 30B	3,79	chr14
TMEM33	55161	Transmembrane protein 33	2,13	chr4
TMEM37	140738	transmembrane protein 37	3,40	chr2
TMEM4	10330	transmembrane protein 4	2,06	chr12
TMEM48	55706	transmembrane protein 48	2,46	chr1
TMEM64	169200	transmembrane protein 64	2,64	chr8
TMEPAI	56937	transmembrane, prostate androgen induced RNA	3,98	chr20
TMPRSS2	7113	transmembrane protease, serine 2	3,12	chr21
TNFRSF12A	51330	tumor necrosis factor receptor superfamily, member 12A	3,08	chr16
TNFSF11	8600	tumor necrosis factor (ligand) superfamily, member 11	5,08	chr13
TNNI3	7137	troponin I type 3 (cardiac)	2,03	chr19
TNPO3	23534	transportin 3	2,11	chr7
TOMM7	201725 /// 54543	translocase of outer mitochondrial membrane 7 homolog (yeast) /// hypoth	2,15	chr7
TOMM70A	9868	translocase of outer mitochondrial membrane 70 homolog A (yeast)	2,90	chr3
TOP1MT	116447	topoisomerase (DNA) I, mitochondrial	2,31	chr8
TOPORS	10210	topoisomerase I binding, arginine/serine-rich	2,17	chr9
TOR3A	64222	torsin family 3, member A	2,04	chr1
TP53RK	112858	TP53 regulating kinase	4,09	chr20
TPARL	55858	TPA regulated locus	2,60	chr4
TPD52	7163	tumor protein D52	7,84	chr8
TPST2	8459	tyrosylprotein sulfotransferase 2	4,76	chr22
TRAF3IP2	10758	TRAF3 interacting protein 2	3,82	chr6
TRAPPC5	126003	trafficking protein particle complex 5	2,27	chr19
TREX2	11219 /// 55559	three prime repair exonuclease 2 /// 26S proteasome-associated UCH inte	2,23	chrX
TRHDE	29953	thyrotropin-releasing hormone degrading enzyme	2,12	chr12
TRIM14	9830	tripartite motif-containing 14	9,94	chr9
TRIM22	10346	tripartite motif-containing 22	4,12	chr11
TRIM37	4591	tripartite motif-containing 37	2,28	chr17
TRIM59	286827	tripartite motif-containing 59	2,63	chr3
TRIM6	117854	tripartite motif-containing 6	4,48	chr11
TRIP10	9322	thyroid hormone receptor interactor 10	2,61	chr19
TSTA3	7264	tissue specific transplantation antigen P35B	2,39	chr8
TTC9	23508	tetratricopeptide repeat domain 9	2,22	chr14
TTF2	8458	transcription termination factor, RNA polymerase II	2,70	chr1
TTMP	79669	TPA-induced transmembrane protein	2,20	chr3
TUBA1	7277	tubulin, alpha 1 (testis specific)	4,99	chr2
TUBB2	7280	tubulin, beta 2	3,04	chr6

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TUBB2	347733 /// 7280	tubulin, beta 2 /// tubulin, beta polypeptide paralog	2,66	chr6
TUBB3	10381	tubulin, beta 3	2,53	chr16
TUBB6	84617	tubulin, beta 6	2,92	chr18
TUBG1	7283	tubulin, gamma 1	2,11	chr7
TUSC2	11334	tumor suppressor candidate 2	2,21	chr3
TXN	7295	thioredoxin	2,18	chr17
TXNL2	10539	thioredoxin-like 2	2,43	chr6
U2AF2	11338	U2 (RNU2) small nuclear RNA auxiliary factor 2	2,58	chr19
UBE2D3	7323	ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast)	2,20	chr4
UBE2G1	7326	ubiquitin-conjugating enzyme E2G 1 (UBC7 homolog, yeast)	3,12	chr17
UBE2M	9040	ubiquitin-conjugating enzyme E2M (UBC12 homolog, yeast)	2,59	chr16
UBE2N	7334	ubiquitin-conjugating enzyme E2N (UBC13 homolog, yeast)	2,61	chr12
UBE2S	27338	ubiquitin-conjugating enzyme E2S	3,04	chr17
UBE3B	89910	ubiquitin protein ligase E3B	2,37	chr12
UBE4B	10277	ubiquitination factor E4B (UFD2 homolog, yeast)	2,30	chr1
UBQLN1	29979	ubiquilin 1	2,04	chr9
UCHL1	7345	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)	2,10	chr4
UCHL3	7347	ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase)	2,04	chr13
UCK2	7371	uridine-cytidine kinase 2	2,34	chr1
UGCGL2	55757	UDP-glucose ceramide glucosyltransferase-like 2	2,49	chr13
UGP2	7360	UDP-glucose pyrophosphorylase 2	4,36	chr2
UGT8	7368	UDP glycosyltransferase 8 (UDP-galactose ceramide galactosyltransferas	7,99	chr4
UIP1	55559	26S proteasome-associated UCH interacting protein 1	2,13	chrX
UMPS	7372	uridine monophosphate synthetase (orotate phosphoribosyl transferase a	2,27	chr3
UNG	7374	uracil-DNA glycosylase	2,01	chr12
UNQ501	374882	MBC3205	2,05	chr19
UQCR	10975	ubiquinol-cytochrome c reductase, 6.4kDa subunit	2,08	chr19
USP28	57646	ubiquitin specific peptidase 28	5,28	chr11
USP31	57478	ubiquitin specific peptidase 31	2,04	chr16
USP44	84101	ubiquitin specific peptidase 44	6,56	chr12
USP48	84196	ubiquitin specific peptidase 48	2,42	chr1
USP53	54532	ubiquitin specific peptidase 53	2,10	chr4
USP9X	8239	ubiquitin specific peptidase 9, X-linked (fat facets-like, Drosophila)	2,32	chrX
UTP11L	51118	UTP11-like, U3 small nucleolar ribonucleoprotein, (yeast)	2,12	chr1
UXS1	80146	UDP-glucuronate decarboxylase 1	2,30	chr2
VAMP8	8673	vesicle-associated membrane protein 8 (endobrevin)	3,21	chr2
VASP	7408	vasodilator-stimulated phosphoprotein	2,58	chr19
VDP	8615	Vesicle docking protein p115	4,00	chr4
VIL2	7430	villin 2 (ezrin)	3,36	chr6
VSNL1	7447	visinin-like 1	4,85	chr2
WBSCR17	64409	Williams-Beuren syndrome chromosome region 17	2,10	chr7
WDFY1	57590	WD repeat and FYVE domain containing 1	2,23	chr2
WDR1	9948	WD repeat domain 1	2,30	chr4
WDR12	55759	WD repeat domain 12	2,28	chr2
WDR21A	26094	WD repeat domain 21A	2,62	chr14
WDR33	55339	WD repeat domain 33	2,02	chr2
WDR39	9391	WD repeat domain 39	2,15	chr2
WDR40B	139170	WD repeat domain 40B	3,17	chrX
WDR44	54521	WD repeat domain 44	2,79	chrX
WDR46	9277	WD repeat domain 46	2,00	chr6
WDR5	11091	WD repeat domain 5	2,19	chr9
WDR67	93594	WD repeat domain 67	2,27	chr8
WDR72	256764	WD repeat domain 72	4,96	chr15
WDR74	54663	WD repeat domain 74 /// WD repeat domain 74	2,58	chr11
WDR77	79084	WD repeat domain 77	2,70	chr1
WDR8	49856	WD repeat domain 8	2,05	chr1
WFDC2	10406	WAP four-disulfide core domain 2	2,79	chr20
WIF1	11197	WNT inhibitory factor 1	10,39	chr12
WNK1	65125	WNK lysine deficient protein kinase 1 /// WNK lysine deficient protein kinas	2,25	chr12
WWTR1	25937	WW domain containing transcription regulator 1	2,11	chr3
XPO5	57510	exportin 5	2,35	chr6
YIF1B	90522	Yip1 interacting factor homolog B (S. cerevisiae)	3,47	chr19
YTHDC2	64848	YTH domain containing 2	2,34	chr5
YTHDF3	253943	YTH domain family, member 3	2,03	chr8
YWHAB	7529	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation prote	2,36	chr20
YWHAE	7531	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation prote	2,22	chr7

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ZA20D2	7763	zinc finger, A20 domain containing 2	2,93	chr9
ZADH1	145482	zinc binding alcohol dehydrogenase, domain containing 1	2,13	chr14
ZBTB3	79842	zinc finger and BTB domain containing 3	5,03	chr11
ZBTB8OS	339487	zinc finger and BTB domain containing 8 opposite strand	2,03	chr1
ZC3HAV1	56829	zinc finger CCCH-type, antiviral 1	3,88	chr7
ZCSL2	285381	zinc finger, CSL-type containing 2	2,68	chr3
ZD52F10	93099	dermokine	3,52	chr19
ZDHHC22	283576	zinc finger, DHHC-type containing 22	2,67	chr14
ZDHHC23	254887	zinc finger, DHHC-type containing 23	5,17	chr3
ZFP42	132625	zinc finger protein 42	11,68	chr4
ZIC3	7547	Zic family member 3 heterotaxy 1 (odd-paired homolog, Drosophila)	4,06	chrX
ZIK1	284307	zinc finger protein interacting with K protein 1	2,17	chr19
ZNF101	94039	zinc finger protein 101	3,08	chr19
ZNF114	163071	zinc finger protein 114	2,49	chr19
ZNF134	7693	zinc finger protein 134 (clone pHZ-15)	2,26	chr19
ZNF138	7697	zinc finger protein 138	2,13	chr7
ZNF146	7705	zinc finger protein 146	2,08	chr19
ZNF165	7718	zinc finger protein 165	5,51	chr6
ZNF204	7754	zinc finger protein 204	2,57	chr6
ZNF206	84891	zinc finger protein 206	8,70	chr16
ZNF217	7764	zinc finger protein 217	2,05	chr20
ZNF239	8187	zinc finger protein 239	2,45	chr10
ZNF253	114977 /// 56242	zinc finger protein 253 /// hypothetical protein BC014148	2,15	chr19
ZNF259	8882	zinc finger protein 259	2,68	chr6
ZNF267	10308	zinc finger protein 267	2,46	chr16
ZNF281	23528	zinc finger protein 281	2,53	chr1
ZNF313	55905	zinc finger protein 313	2,10	chr20
ZNF342	162979	zinc finger protein 342	2,30	chr19
ZNF398	57541	zinc finger protein 398	4,29	chr7
ZNF483	158399	zinc finger protein 483	2,04	chr9
ZNF488	118738	zinc finger protein 488	2,04	chr10
ZNF581	51545	zinc finger protein 581	2,10	chr19
ZNF588	51427	zinc finger protein 588	2,31	chr7
ZNF589	51385	zinc finger protein 589	3,76	chr3
ZNF600	162966	zinc finger protein 600	2,61	chr19
ZNF614	80110	zinc finger protein 614	2,21	chr19
ZNF616	90317	zinc finger protein 616	2,10	chr19
ZNF649	65251	zinc finger protein 649	6,04	chr19
ZNF691	51058	zinc finger protein 691	2,19	chr1
ZNF90	7643	zinc finger protein 90 (HTF9)	2,04	chr19
ZRF1	27000	Zuotin related factor 1	2,10	chr7
ZSCAN2	54993	zinc finger and SCAN domain containing 2	2,83	chr15
ZSWIM3	140831	zinc finger, SWIM-type containing 3	2,40	chr20
ZYG11A	440590	zyg-11 homolog A (C. elegans)	2,93	chr1
ZYX	7791	zyxin	2,23	chr7
		Primary neuroblastoma cDNA, clone:Nbla11652	39,16	(vide)
		carbohydrate (N-acetylgalactosamine 4-0) sulfotransferase 9 /// carbohydr	3,73	(vide)
		HESB like domain containing 2 /// HESB like domain containing 2	2,91	chr14
		ubiquitin specific peptidase 32 /// ubiquitin specific peptidase 32	2,78	chr11
		dual specificity phosphatase 16 /// dual specificity phosphatase 16	2,65	chr21
		G1 to S phase transition 1 /// G1 to S phase transition 1	2,64	chrY
		ubiquitin specific peptidase 45 /// ubiquitin specific peptidase 45	2,54	chr6_random
		proteasome (prosome, macropain) subunit, beta type, 2 /// proteasome (p	2,27	chr19
		mitochondrial ribosomal protein S18A /// mitochondrial ribosomal protein S	2,15	chr8

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38961	23157	septin 6	2,09	chrX
39326	989	Septin 7	2,10	chr7
40787	55752	Septin 11	73,88	chr4
MICB	4276 /// 4277	MHC class I polypeptide-related sequence A /// MHC class I polypeptide-relatec	8,37	chr6
AADACL1	57552	arylacetamide deacetylase-like 1	4,26	chr3
ABHD2	11057	abhydrolase domain containing 2	2,32	chr15
ABI1	10006	abl-interactor 1	2,24	chr10
ABI3BP	25890	ABI gene family, member 3 (NESH) binding protein	5,82	chr3
ABLIM3	22885	actin binding LIM protein family, member 3	2,00	chr5
ABR	29	active BCR-related gene	2,64	chr17
ACBD3	64746	acyl-Coenzyme A binding domain containing 3	2,33	chr1
ACOX3	8310	acyl-Coenzyme A oxidase 3, pristanoyl	6,12	chr4
ACP2	53	acid phosphatase 2, lysosomal	2,32	chr11
ACSL1	2180	acyl-CoA synthetase long-chain family member 1	4,65	chr4
ACSL4	2182	acyl-CoA synthetase long-chain family member 4	3,23	chrX
ACSS2	55902	acyl-CoA synthetase short-chain family member 2	2,59	chr20
ACTA2	59	actin, alpha 2, smooth muscle, aorta	100,38	chr10
ACTG2	72	actin, gamma 2, smooth muscle, enteric	92,67	chr2
ACTN1	87	actinin, alpha 1	5,49	chr14
ACTN4	81	actinin, alpha 4	3,50	chr19
ACTR10	55860	actin-related protein 10 homolog (S. cerevisiae)	2,52	chr14
ACTR1A	10121	ARP1 actin-related protein 1 homolog A, centractin alpha (yeast)	2,60	chr10
ACTR2	10097	ARP2 actin-related protein 2 homolog (yeast)	4,01	chr2
ACTR3	10096	ARP3 actin-related protein 3 homolog (yeast)	3,56	chr2
ACVR1	90	activin A receptor, type I	2,11	chr2
ADA	100	adenosine deaminase	2,90	chr20
ADAM10	102	ADAM metallopeptidase domain 10	2,14	chr15
ADAM12	8038	ADAM metallopeptidase domain 12 (meltrin alpha)	18,98	chr10
ADAM19	8728	ADAM metallopeptidase domain 19 (meltrin beta)	17,94	chr5
ADAM23	8745	ADAM metallopeptidase domain 23	3,67	chr2
ADAM9	8754	ADAM metallopeptidase domain 9 (meltrin gamma)	18,84	chr8
ADAMTS1	9510	ADAM metallopeptidase with thrombospondin type 1 motif, 1	4,91	chr21
ADAMTS5	11096	ADAM metallopeptidase with thrombospondin type 1 motif, 5 (aggrecanase-2)	9,73	(vide)
ADAMTS6	11174	ADAM metallopeptidase with thrombospondin type 1 motif, 6	23,20	chr5
ADARB1	104	adenosine deaminase, RNA-specific, B1 (RED1 homolog rat)	2,66	chr21
ADCY6	112	adenylate cyclase 6	2,68	chr12
ADCY7	113	adenylate cyclase 7	4,04	chr16
ADCY9	115	adenylate cyclase 9	2,59	chr16
ADD1	118	adducin 1 (alpha)	6,50	chr4
ADK	132	adenosine kinase	4,23	chr10
ADM	133	adrenomedullin	2,37	chr11
AEBP1	165	AE binding protein 1	3,30	chr7
AER61	285203	AER61 glycosyltransferase	2,05	chr3
AFAP	60312	actin filament associated protein	6,64	chr4
AFF3	3899	AF4/FMR2 family, member 3	17,41	chr2
AG1	440673	AG1 protein	2,73	chr1
AGA	175	aspartylglucosaminidase	3,03	chr4
AGPAT3	56894	1-acylglycerol-3-phosphate O-acyltransferase 3	18,83	chr21
AGTR1	185	angiotensin II receptor, type 1	6,52	chr3
AHI1	54806	Abelson helper integration site	2,70	chr6
AHNAK	79026	AHNAK nucleoprotein (desmoyokin)	16,67	chr11
AHR	196	aryl hydrocarbon receptor	8,35	chr7
AK1	203	adenylate kinase 1	5,98	chr9
AK2	204	adenylate kinase 2	5,50	chr1
AK5	26289	adenylate kinase 5	4,34	chr1
AKAP12	9590	A kinase (PRKA) anchor protein (gravin) 12	3,01	chr6
AKAP2	11217 /// 445815	A kinase (PRKA) anchor protein 2 /// PALM2-AKAP2 protein	2,80	chr9
AKT1	207	v-akt murine thymoma viral oncogene homolog 1	3,57	chr14
AKT3	10000	V-akt murine thymoma viral oncogene homolog 3 (protein kinase B, gamma)	6,86	chr1
ALCAM	214	activated leukocyte cell adhesion molecule	14,41	chr3
ALDH1L2	160428	aldehyde dehydrogenase 1 family, member L2	15,17	chr12
ALG14	199857	asparagine-linked glycosylation 14 homolog (yeast)	2,56	chr1
ALPK2	115701	alpha-kinase 2	13,60	chr18
ALS2	57679	amyotrophic lateral sclerosis 2 (juvenile)	2,48	chr2
ALS2CR19	117583	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 19	2,17	chr1
ALS2CR3	66008	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 3	4,36	chr2

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ALS2CR4	65062	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 4	2,26	chr2
ALS2CR7	65061	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 7	5,16	chr2
AMFR	267	autocrine motility factor receptor	3,63	chr16
AMIGO2	347902	adhesion molecule with Ig-like domain 2	60,78	chr12
AMOTL1	154810	angiomotin like 1	3,56	chr11
AMOTL2	51421	angiomotin like 2	4,97	chr3
AMPD2	271	adenosine monophosphate deaminase 2 (isoform L)	2,02	chr1
ANAPC13	25847	anaphase promoting complex subunit 13	2,48	chr3
ANGPTL2	23452	angiopoietin-like 2	2,49	chr9
ANKH	56172	ankylosis, progressive homolog (mouse)	2,33	chr5
ANKRA2	57763	ankyrin repeat, family A (RFXANK-like), 2	2,58	chr5
ANKRD1	27063	ankyrin repeat domain 1 (cardiac muscle)	9,51	chr10
ANKRD13	88455	ankyrin repeat domain 13	10,10	chr12
ANKRD25	25959	ankyrin repeat domain 25	2,08	chr19
ANKRD28	23243	ankyrin repeat domain 28	6,26	chr3
ANKRD44	91526	Ankyrin repeat domain 44	4,98	chr2
ANTXR1	84168	anthrax toxin receptor 1	4,37	chr2
ANTXR2	118429	Anthrax toxin receptor 2	17,52	chr4
ANXA1	301	annexin A1	50,64	chr9
ANXA11	311	annexin A11	2,15	chr10
ANXA2	302	annexin A2	7,32	chr9
ANXA2P1	303	annexin A2 pseudogene 1	3,65	chr4
ANXA2P2	304	annexin A2 pseudogene 2	7,03	chr9
ANXA4	307	annexin A4	2,99	chr2
ANXA5	308	annexin A5	2,64	chr4
ANXA6	309	annexin A6	7,19	chr5
AOF1	221656	amine oxidase (flavin containing) domain 1	2,47	chr6
AP1M1	8907	adaptor-related protein complex 1, mu 1 subunit	2,57	chr19
AP1S1	1174	adaptor-related protein complex 1, sigma 1 subunit	2,71	chr7
AP2M1	1173	adaptor-related protein complex 2, mu 1 subunit	2,55	chr3
AP2S1	1175	adaptor-related protein complex 2, sigma 1 subunit	2,12	chr19
APBA2	321	amyloid beta (A4) precursor protein-binding, family A, member 2 (X11-like)	2,11	chr15
APOBEC3C	27350	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3C	3,18	chr22
APPBP2	10513	amyloid beta precursor protein (cytoplasmic tail) binding protein 2	5,39	chr17
ARAF	369	v-raf murine sarcoma 3611 viral oncogene homolog	2,20	chrX
ARF4	378	ADP-ribosylation factor 4	2,73	chr3
ARF4L	379	ADP-ribosylation factor 4-like	2,70	chr17
ARFGAP1	55738	ADP-ribosylation factor GTPase activating protein 1	2,63	chr20
ARFGAP3	26286	ADP-ribosylation factor GTPase activating protein 3	4,76	chr22
ARHGAP1	392	Rho GTPase activating protein 1	2,35	chr11
ARHGAP18	93663	Rho GTPase activating protein 18	4,52	chr6
ARHGAP23	57636	Rho GTPase activating protein 23	4,45	chr17
ARHGAP24	83478	Rho GTPase activating protein 24	10,45	chr4
ARHGAP29	9411	Rho GTPase activating protein 29	6,50	chr1
ARHGAP5	394	Rho GTPase activating protein 5	2,61	chr14
ARHGAP6	395	Rho GTPase activating protein 6	2,11	chrX
ARHGDIA	396	Rho GDP dissociation inhibitor (GDI) alpha /// Rho GDP dissociation inhibitor (G	3,69	chr17_random
ARHGDIB	397	Rho GDP dissociation inhibitor (GDI) beta	20,28	chr12
ARHGEF12	23365	Rho guanine nucleotide exchange factor (GEF) 12	3,21	chr11
ARHGEF17	9828	Rho guanine nucleotide exchange factor (GEF) 17	2,09	chr11
ARID5B	84159	AT rich interactive domain 5B (MRF1-like)	135,65	chr10
ARL1	400	ADP-ribosylation factor-like 1	2,71	chr12
ARL2BP	23568	ADP-ribosylation factor-like 2 binding protein	3,01	chr16
ARL6IP5	10550	ADP-ribosylation-like factor 6 interacting protein 5	6,20	chr3
ARL7	10123	ADP-ribosylation factor-like 7	4,22	chr2
ARMCX3	51566	armadillo repeat containing, X-linked 3	6,67	chrX
ARPC1B	10095	actin related protein 2/3 complex, subunit 1B, 41kDa	2,24	chr7
ARPC2	10109	actin related protein 2/3 complex, subunit 2, 34kDa	2,13	chr2
ARPC5	10092	actin related protein 2/3 complex, subunit 5, 16kDa	3,48	chr1
ARRDC4	91947	arrestin domain containing 4	7,86	chr15
ARSB	411	arylsulfatase B	3,20	chr5
ARSI	340075	arylsulfatase I	2,15	chr5
ARSJ	79642	arylsulfatase J	70,99	chr4
ARTS-1	51752	type 1 tumor necrosis factor receptor shedding aminopeptidase regulator	3,05	chr5
ASAH1	427	N-acylsphingosine amidohydrolase (acid ceramidase) 1	2,03	chr8
ASAM	79827	Adipocyte-specific adhesion molecule	5,27	chr11

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ASB8	140461	ankyrin repeat and SOCS box-containing 8	4,22	chr12
ASPH	444	Aspartate beta-hydroxylase	7,54	chr8
ASXL1	171023	additional sex combs like 1 (Drosophila)	3,56	chr20
ATBF1	463	AT-binding transcription factor 1	4,23	chr16
ATF6	22926	Activating transcription factor 6	4,17	chr1
ATG4A	115201	ATG4 autophagy related 4 homolog A (S. cerevisiae)	3,34	chrX
ATG7	10533	ATG7 autophagy related 7 homolog (S. cerevisiae)	2,99	chr3
ATM	472	ataxia telangiectasia mutated (includes complementation groups A, C and D)	2,49	chr11
ATP10A	57194	ATPase, Class V, type 10A	2,95	chr15
ATP10D	57205	ATPase, Class V, type 10D	32,40	chr4
ATP11B	23200	ATPase, Class VI, type 11B	4,34	chr3
ATP13A3	79572	ATPase type 13A3	4,08	chr3
ATP2A2	488	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	2,04	chr12
ATP2B4	493	ATPase, Ca++ transporting, plasma membrane 4	11,50	chr1
ATP2C1	27032	ATPase, Ca++ transporting, type 2C, member 1	4,09	chr3
ATP5E	514	ATP synthase, H+ transporting, mitochondrial F1 complex, epsilon subunit	2,17	chr20
ATP6AP2	10159	ATPase, H+ transporting, lysosomal accessory protein 2	2,17	chrX
ATP6V0D1	9114	ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d isoform 1	2,09	chr16
ATP6V0E	8992	ATPase, H+ transporting, lysosomal 9kDa, V0 subunit e	3,70	chr5
ATP7A	538	ATPase, Cu++ transporting, alpha polypeptide (Menkes syndrome)	6,56	chrX
ATP8B1	5205	ATPase, Class I, type 8B, member 1	24,44	chr18
ATP9A	10079	ATPase, Class II, type 9A	3,17	chr20
ATXN1	6310	ataxin 1	10,66	chr6
AVO3	253260	TORC2-specific protein AVO3	2,26	chr5
AXL	558	AXL receptor tyrosine kinase	10,29	chr19
AZI2	64343	5-azacytidine induced 2	3,19	chr3
B2M	567	beta-2-microglobulin	7,86	chr15
B3GALT6	126792	UDP-Gal:betaGal beta 1,3-galactosyltransferase polypeptide 6	2,12	chr1
B3GTL	145173	beta 3-glycosyltransferase-like	3,13	chr13
B4GALT1	2683	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1	2,38	chr9
bA16L21.2.1	548645	DnaJ-like protein	2,04	chr9
BACE1	23621	beta-site APP-cleaving enzyme 1	9,01	chr11
BACE2	25825	beta-site APP-cleaving enzyme 2	4,07	chr21
BACH1	571	BTB and CNC homology 1, basic leucine zipper transcription factor 1	4,61	chr21
BAG2	9532	BCL2-associated athanogene 2	2,08	chr6
BAG3	9531	BCL2-associated athanogene 3	4,88	chr10
BAZ1A	11177	bromodomain adjacent to zinc finger domain, 1A	2,35	chr14
BBX	56987	Bobby sox homolog (Drosophila)	2,15	chr3
BC002942	91289	hypothetical protein BC002942	4,19	chr22
BCAP29	55973	B-cell receptor-associated protein 29	3,69	chr7
BCAR3	8412	Breast cancer anti-estrogen resistance 3	5,25	chr1
BCAT1	586	branched chain aminotransferase 1, cytosolic	2,15	chr12
BCL10	8915	B-cell CLL/lymphoma 10	2,12	chr1
BCL2L13	23786	BCL2-like 13 (apoptosis facilitator)	2,47	chr22
BCL2L2	599	BCL2-like 2	2,53	chr14
BCL3	602	B-cell CLL/lymphoma 3	3,22	chr19
BCL6	604	B-cell CLL/lymphoma 6 (zinc finger protein 51) /// B-cell CLL/lymphoma 6 (zinc	4,77	chr3
BDKRB1	623	bradykinin receptor B1	4,87	chr14
BDKRB2	624	bradykinin receptor B2	2,23	chr14
BDNF	627	brain-derived neurotrophic factor	25,72	chr11
BET1L	51272	blocked early in transport 1 homolog (S. cerevisiae)-like	2,02	chr11
BGN	633	biglycan	23,88	chrX
BGN	10194 /// 633	biglycan /// serologically defined colon cancer antigen 33	39,55	chrX
BHLHB2	8553	basic helix-loop-helix domain containing, class B, 2	6,35	chr3
BHLHB3	79365	basic helix-loop-helix domain containing, class B, 3	4,59	chr12
BIC	114614	BIC transcript	2,42	chr21
BICD2	23299	bicaudal D homolog 2 (Drosophila)	3,05	chr9
BID	637	BH3 interacting domain death agonist	2,33	chr22
BIRC2	329	baculoviral IAP repeat-containing 2	2,55	chr11
BIRC4	331	baculoviral IAP repeat-containing 4	2,01	chrX
BIVM	54841	basic, immunoglobulin-like variable motif containing	2,86	chr13
Bles03	83638	basophilic leukemia expressed protein BLES03	2,16	chr11
BLZF1	8548	basic leucine zipper nuclear factor 1 (JEM-1)	3,21	chr1
BMP1	649	bone morphogenetic protein 1	8,18	chr8
BMPR2	659	bone morphogenetic protein receptor, type II (serine/threonine kinase)	11,78	chr2
BNC1	646	basonuclin 1	9,76	chr15

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BNIP2	663	BCL2/adenovirus E1B 19kDa interacting protein 2	2,71	chr15
BNIP3L	665	BCL2/adenovirus E1B 19kDa interacting protein 3-like /// BCL2/adenovirus E1B	4,10	chr8
BPGM	669	2,3-bisphosphoglycerate mutase /// 2,3-bisphosphoglycerate mutase	3,32	chr7
BPNT1	10380	3'(2'), 5'-bisphosphate nucleotidase 1	2,40	chr1
BRP44L	51660	brain protein 44-like	2,70	chr6
BTBD6	90135	BTB (POZ) domain containing 6	4,67	chr14
BTBD7	55727	BTB (POZ) domain containing 7	2,88	chr14
BTG2	7832	BTG family, member 2	3,36	chr1
BTN2A1	11120	butyrophilin, subfamily 2, member A1	2,04	chr6
BTN3A1	11119	butyrophilin, subfamily 3, member A1	2,23	chr6
BTN3A2	11118	butyrophilin, subfamily 3, member A2	3,77	chr6
BTN3A3	10384 /// 11118	butyrophilin, subfamily 3, member A3 /// butyrophilin, subfamily 3, member A2	5,21	chr6
BVES	11149	blood vessel epicardial substance	6,10	chr6
BZRP	706	benzodiazapine receptor (peripheral)	9,01	chr22
C10orf10	11067	chromosome 10 open reading frame 10	9,04	chr10
C10orf32	119032	chromosome 10 open reading frame 32	3,34	chr10
C10orf45	83641	chromosome 10 open reading frame 45	2,91	chr10
C10orf56	219654	chromosome 10 open reading frame 56	4,53	chr10
C10orf88	80007	chromosome 10 open reading frame 88	3,76	chr10
C10orf97	80013	chromosome 10 open reading frame 97	2,62	chr10
C11orf17	56672	chromosome 11 open reading frame 17	2,94	chr11
C11orf17 /// NUA	56672 /// 81788	chromosome 11 open reading frame 17 /// chromosome 11 open reading frame	2,23	chr1
C11orf24	53838	chromosome 11 open reading frame 24	2,57	chr11
C11orf41	25758	chromosome 11 open reading frame 41	3,95	chr11
C11orf9	745	chromosome 11 open reading frame 9	3,13	chr11
C13orf1	57213	chromosome 13 open reading frame 1	2,52	chr13
C13orf12	51371	chromosome 13 open reading frame 12	4,45	chr13
C14orf125	25938	chromosome 14 open reading frame 125	2,98	chr14
C14orf139	79686	chromosome 14 open reading frame 139	16,45	chr14
C14orf149	112849	chromosome 14 open reading frame 149	4,64	chr14
C14orf24	283635	chromosome 14 open reading frame 24	4,17	chr14
C14orf28	122525	chromosome 14 open reading frame 28	4,52	chr14
C14orf34	55673	chromosome 14 open reading frame 34	2,07	chr17
C14orf37	145407	chromosome 14 open reading frame 37	2,65	chr14
C14orf43	91748	chromosome 14 open reading frame 43	2,47	chr14
C14orf44	145483	Chromosome 14 open reading frame 44	2,01	chr14
C14orf45	80127	chromosome 14 open reading frame 45	5,28	chr14
C14orf78	113146	chromosome 14 open reading frame 78	8,90	chr14
C14orf92	9878	chromosome 14 open reading frame 92	2,32	chr4
C15orf21	283651	Chromosome 15 open reading frame 21	21,94	chr15
C15orf38	348110	Chromosome 15 open reading frame 38	2,46	chr15
C16orf30	79652	chromosome 16 open reading frame 30	2,19	chr16
C18orf10	25941	Chromosome 18 open reading frame 10	2,08	chr18
C18orf4	92126	chromosome 18 open reading frame 4	3,23	chr18
C19orf10	56005	chromosome 19 open reading frame 10	4,24	chr19
C1orf119	56900	chromosome 1 open reading frame 119	2,93	chr1
C1orf139	79971	chromosome 1 open reading frame 139	26,40	chr1
C1orf144	26099	chromosome 1 open reading frame 144	8,89	chr1
C1orf22	80267	chromosome 1 open reading frame 22	6,25	chr1
C1orf24	116496	chromosome 1 open reading frame 24	3,10	chr1
C1orf53	388722	chromosome 1 open reading frame 53	2,25	chr1
C1orf54	79630	chromosome 1 open reading frame 54	2,49	chr1
C1orf71	163882	chromosome 1 open reading frame 71	3,06	chr1
C1orf78	55194	chromosome 1 open reading frame 78 /// chromosome 1 open reading frame 7	2,33	chr1
C1orf85	112770	Chromosome 1 open reading frame 85	7,06	chr1
C1orf91	56063	chromosome 1 open reading frame 91	2,42	chr1
C20orf100	84969	chromosome 20 open reading frame 100	2,46	chr20
C20orf117	140710	chromosome 20 open reading frame 117	2,41	chr20
C20orf142	128486	chromosome 20 open reading frame 142	4,11	chr20
C20orf18	10616	chromosome 20 open reading frame 18	2,16	chr20
C20orf194	25943	chromosome 20 open reading frame 194	2,47	chr20
C20orf22	26090	chromosome 20 open reading frame 22	2,43	chr20
C20orf29	55317	chromosome 20 open reading frame 29	2,43	chr20
C21orf51	54065	chromosome 21 open reading frame 51	2,22	chr21
C21orf7	56911	chromosome 21 open reading frame 7	24,00	chr21
C21orf86	257103	Chromosome 21 open reading frame 86	2,11	chr21

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C2orf10	91752	chromosome 2 open reading frame 10	4,29	chr2
C2orf17	79137	chromosome 2 open reading frame 17	3,82	chr2
C2orf18	54978	chromosome 2 open reading frame 18	3,27	chr2
C2orf27	29798	Chromosome 2 open reading frame 27	6,46	chr2
C2orf30	27248	chromosome 2 open reading frame 30	3,50	chr2
C2orf32	25927	chromosome 2 open reading frame 32	13,68	chr2
C2orf7	84279	chromosome 2 open reading frame 7	2,50	chr2
C3orf6	152137	chromosome 3 open reading frame 6	6,50	chr3
C5orf13	9315	chromosome 5 open reading frame 13	3,39	chr5
C5orf14	79770	chromosome 5 open reading frame 14	2,56	chr5
C5orf3	10827	chromosome 5 open reading frame 3	4,97	chr5
C6orf145	221749	chromosome 6 open reading frame 145	28,85	chr6
C6orf155	79940	Chromosome 6 open reading frame 155	31,16	chr6
C6orf188	254228	chromosome 6 open reading frame 188	2,10	chr6
C6orf48	50854	chromosome 6 open reading frame 48	2,22	chr6
C6orf62	81688	chromosome 6 open reading frame 62	2,02	chr6
C6orf65	221336	chromosome 6 open reading frame 65	4,70	chr6
C6orf69	222658	chromosome 6 open reading frame 69	8,87	chr6
C6orf72	116254	chromosome 6 open reading frame 72	2,34	chr6
C6orf89	221477	Chromosome 6 open reading frame 89	5,92	chr6
C7orf10	79783	chromosome 7 open reading frame 10	3,44	chr7
C7orf19	80228	chromosome 7 open reading frame 19	2,02	chr7
C7orf25	79020	chromosome 7 open reading frame 25	2,09	chr7
C9orf10	23196	chromosome 9 open reading frame 10	5,77	chr9
C9orf150	286343	chromosome 9 open reading frame 150	6,47	chr9
C9orf19	152007	chromosome 9 open reading frame 19	2,43	chr9
C9orf3	84909	chromosome 9 open reading frame 3	3,37	chr9
C9orf80	58493	Chromosome 9 open reading frame 80	2,67	chr9
C9orf88	64855	chromosome 9 open reading frame 88	6,54	chr9
C9orf89	84270	chromosome 9 open reading frame 89	2,09	chr9
C9orf94	206938	chromosome 9 open reading frame 94	6,26	chr9
C9orf95	54981	chromosome 9 open reading frame 95	3,37	chr9
CA12	771	carbonic anhydrase XII	11,03	chr15
CAB39L	81617	calcium binding protein 39-like	2,08	chr13
CACNB3	784	calcium channel, voltage-dependent, beta 3 subunit	2,91	chr12
CALCOCO1	57658	calcium binding and coiled-coil domain 1	3,05	chr12
CALD1	800	caldesmon 1	18,09	chr7
CALU	813	calumenin	5,44	chr7
CAMK2D	817	Calcium/calmodulin-dependent protein kinase (CaM kinase) II delta	9,74	chr4
CAMK2N1	55450	calcium/calmodulin-dependent protein kinase II inhibitor 1	10,98	chr1
CAMTA2	23125	calmodulin binding transcription activator 2	3,19	chr17
CANT1	124583	calcium activated nucleotidase 1	2,11	chr17
CAP1	10487	CAP, adenylate cyclase-associated protein 1 (yeast)	2,51	chr1
CAP2	10486	CAP, adenylate cyclase-associated protein, 2 (yeast)	7,26	chr6
CAPN2	824	calpain 2, (m/II) large subunit	13,95	chr1
CAPN7	23473	calpain 7	3,02	chr3
CAPNS1	826	calpain, small subunit 1 /// calpain, small subunit 1	3,94	chr19
CART1	8092	cartilage paired-class homeoprotein 1	2,51	chr12
CASC4	113201	cancer susceptibility candidate 4	3,50	chr15
CASP4	837	caspase 4, apoptosis-related cysteine peptidase	3,52	chr11
CASP7	840	caspase 7, apoptosis-related cysteine peptidase	3,07	chr10
CASP8	841	caspase 8, apoptosis-related cysteine peptidase	4,36	chr2
CAST	831	calpastatin	6,80	chr5
CAV1	857	caveolin 1, caveolae protein, 22kDa	27,31	chr7
CAV2	858	caveolin 2	46,79	chr7
CBFB	865	core-binding factor, beta subunit	2,72	chr16
CBR3	874	carbonyl reductase 3	3,59	chr21
CBX4	8535	chromobox homolog 4 (Pc class homolog, Drosophila)	6,13	chr17
CBX6	23466	Chromobox homolog 6	3,65	chr22
CCBE1	147372	collagen and calcium binding EGF domains 1	2,79	chr18
CCDC6	8030	coiled-coil domain containing 6	2,23	chr10
CCDC75	253635	Coiled-coil domain containing 75	2,67	chr2
CCND1	595	cyclin D1	6,46	chr11
CCND3	896	cyclin D3	2,20	chr6
CCNG2	901	Cyclin G2	2,05	chr4
CCPG1	9236	cell cycle progression 1	9,01	chr15

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CD109	135228	CD109 antigen (Gov platelet alloantigens)	10,06	chr6
CD151	977	CD151 antigen	6,14	chr11
CD164	8763	CD164 antigen, sialomucin	2,57	chr6
CD24	934	CD24 antigen (small cell lung carcinoma cluster 4 antigen)	2,83	chr5
CD248	57124	CD248 antigen, endosialin	12,50	chr11
CD274	29126	CD274 antigen	40,81	chr9
CD44	960	CD44 antigen (homing function and Indian blood group system)	111,41	chr11
CD47	961	CD47 antigen (Rh-related antigen, integrin-associated signal transducer)	10,25	chr3
CD58	965	CD58 antigen, (lymphocyte function-associated antigen 3)	2,04	chr1
CD59	966	CD59 antigen p18-20 (antigen identified by monoclonal antibodies 16.3A5, EJ1	15,10	chr11
CD99	4267	CD99 antigen	13,94	chrX
CD99L2	83692	CD99 antigen-like 2	5,02	chrX
CDA08	81533	T-cell immunomodulatory protein	3,36	chr16
CDC27	996	Cell division cycle 27	2,65	chr17
CDC2L6	23097	cell division cycle 2-like 6 (CDK8-like)	3,15	chr6
CDC42	998	cell division cycle 42 (GTP binding protein, 25kDa)	2,39	chr1
CDC42BPA	8476	CDC42 binding protein kinase alpha (DMPK-like)	2,33	chr1
CDC42EP3	10602	CDC42 effector protein (Rho GTPase binding) 3	40,24	chr2
CDC42EP5	148170	CDC42 effector protein (Rho GTPase binding) 5	26,82	chr19
CDGAP	57514	Cdc42 GTPase-activating protein	2,48	chr3
CDH10	1008	cadherin 10, type 2 (T2-cadherin)	4,25	chr5
CDH11	1009	cadherin 11, type 2, OB-cadherin (osteoblast)	30,34	chr16
CDH13	1012	cadherin 13, H-cadherin (heart)	14,00	chr16
CDH2	1000	cadherin 2, type 1, N-cadherin (neuronal)	6,83	chr18
CDH6	1004	cadherin 6, type 2, K-cadherin (fetal kidney)	4,81	chr5
CDK6	1021	cyclin-dependent kinase 6	24,64	chr7
CDKN1A	1026	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	55,11	chr6
CDKN2A	1029	cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)	22,27	chr9
CDKN2B	1030	cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)	45,10	chr9
CDKN2C	1031	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)	6,71	chr1
CEBPD	1052	CCAAT/enhancer binding protein (C/EBP), delta	5,63	chr8
CEECAM1	51148	cerebral endothelial cell adhesion molecule 1	6,20	chr9
CENTB5	116983	centaurin, beta 5	2,06	chr1
CES2	8824	carboxylesterase 2 (intestine, liver)	2,29	chr16
CFH	3075	complement factor H	6,49	chr1
CFHL1	3075 /// 3078	complement factor H /// complement factor H-related 1	10,31	chr1
CFL1	1072	cofilin 1 (non-muscle)	2,23	chr1
CFL2	1073	cofilin 2 (muscle)	13,08	chr14
CFLAR	8837	CASP8 and FADD-like apoptosis regulator	3,61	chr2
CGI-116	51019	CGI-116 protein	3,64	chr12
CHD2	1106	chromodomain helicase DNA binding protein 2	2,17	chr15
CHD3	1107	chromodomain helicase DNA binding protein 3	3,27	chr17
CHES1	1112	checkpoint suppressor 1	2,07	chr14
CHID1	66005	Chitinase domain containing 1	3,05	chr11
CHM	1121	choroideremia (Rab escort protein 1)	2,13	chrX
CHMP1B	57132	chromatin modifying protein 1B	2,19	chr18
CHMP5	51510	chromatin modifying protein 5	2,35	chr9
CHPF	79586	chondroitin polymerizing factor	2,40	chr2
CHST3	9469	carbohydrate (chondroitin 6) sulfotransferase 3	3,32	chr10
CHURC1	91612	churchill domain containing 1	2,50	chr1
CIB1	10519	calcium and integrin binding 1 (calmyrin)	3,77	chr15
CIRBP	1153	cold inducible RNA binding protein	2,41	chr19
CITED2	10370	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain	3,77	chr6
CKAP4	10970	cytoskeleton-associated protein 4	4,50	chr12
CKIP-1	51177	CK2 interacting protein 1; HQ0024c protein	2,67	chr1
CLCC1	23155	chloride channel CLIC-like 1	2,05	chr1
CLCN3	1182	chloride channel 3	2,07	chr4
CLDN1	9076	claudin 1	10,12	chr3
CLIPR-59	25999	CLIP-170-related protein	3,38	chr19
CLN5	1203	ceroid-lipofuscinosis, neuronal 5	4,59	chr13
CLSTN2	64084	calsyntenin 2	2,86	chr3
CLTB	1212	clathrin, light polypeptide (Lcb) /// clathrin, light polypeptide (Lcb)	2,22	chr5
CMPK	51727	cytidylate kinase	8,32	chr1
CNIH	10175	Cornichon homolog (Drosophila)	3,43	chr14
CNKSR3	154043	CNKSR family member 3	2,08	chr6
CNN1	1264	calponin 1, basic, smooth muscle	12,00	chr19

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CNN2	1265	calponin 2	3,51	chr19
CNN3	1266	calponin 3, acidic	2,21	chr1
CNTNAP1	8506	contactin associated protein 1	3,78	chr17
COBLL1	22837	COBL-like 1	3,42	chr2
COG1	9382	component of oligomeric golgi complex 1	2,27	chr17
COG5	10466	component of oligomeric golgi complex 5	3,88	chr7
COG6	57511	component of oligomeric golgi complex 6	4,62	chr13
COL11A1	1301	collagen, type XI, alpha 1	36,87	chr1
COL12A1	1303	collagen, type XII, alpha 1	118,63	chr6
COL13A1	1305	collagen, type XIII, alpha 1	8,13	chr10
COL1A1	1277	collagen, type I, alpha 1	99,56	chr17
COL1A2	1278	Collagen, type I, alpha 2	52,81	chr7
COL25A1	84570	collagen, type XXV, alpha 1	2,08	chr4
COL3A1	1281	collagen, type III, alpha 1 (Ehlers-Danlos syndrome type IV, autosomal domina	80,39	(vide)
COL4A1	1282	collagen, type IV, alpha 1	18,41	chr13
COL4A2	1284	collagen, type IV, alpha 2	21,01	chr13
COL4A5	1287	collagen, type IV, alpha 5 (Alport syndrome)	2,58	chrX
COL5A1	1289	collagen, type V, alpha 1	118,26	chr9
COL5A2	1290	collagen, type V, alpha 2	82,78	chr2
COL6A1	1291	collagen, type VI, alpha 1	3,20	chr21
COL6A2	1292	collagen, type VI, alpha 2	51,34	chr21
COL6A3	1293	collagen, type VI, alpha 3	82,16	chr2
COL8A1	1295	Collagen, type VIII, alpha 1	291,36	chr3
COLEC12	81035	collectin sub-family member 12 /// collectin sub-family member 12	8,37	chr18
COMMD3	23412	COMM domain containing 3	9,33	chr10
COMMD8	54951	COMM domain containing 8	3,62	chr4
COMT	1312	catechol-O-methyltransferase	5,97	chr22
COPA	1314	coatomer protein complex, subunit alpha	2,51	chr1
COPB	1315	coatomer protein complex, subunit beta	3,08	chr11
COPB2	9276	coatomer protein complex, subunit beta 2 (beta prime)	2,27	chr3
COPE	11316	coatomer protein complex, subunit epsilon	2,19	chr19
COPG	22820	coatomer protein complex, subunit gamma	2,74	chr3
COPZ1	22818	coatomer protein complex, subunit zeta 1	2,20	chr12
COPZ2	51226	coatomer protein complex, subunit zeta 2	20,86	chr17
CORO1C	23603	coronin, actin binding protein, 1C	7,82	chr12
COTL1	23406	coactosin-like 1 (Dictyostelium)	2,66	chr16
CPA4	51200	carboxypeptidase A4	9,29	chr7
CPE	1363	carboxypeptidase E	5,86	chr4
CPEB2	132864	cytoplasmic polyadenylation element binding protein 2	8,67	chr4
CPEB4	80315	cytoplasmic polyadenylation element binding protein 4	2,96	chr5
CRAT	1384	carnitine acetyltransferase	3,90	chr9
CREB3	10488	cAMP responsive element binding protein 3	4,52	chr9
CREB3L1	90993	cAMP responsive element binding protein 3-like 1	13,03	chr11
CREB3L2	64764	cAMP responsive element binding protein 3-like 2	3,27	chr7
CREB5	9586	cAMP responsive element binding protein 5	6,36	chr7
CRELD1	78987	cysteine-rich with EGF-like domains 1	2,88	chr3
CRI1	23741	CREBBP/EP300 inhibitor 1 /// CREBBP/EP300 inhibitor 1	2,73	chr15
CRIM1	51232	cysteine rich transmembrane BMP regulator 1 (chordin-like)	22,12	chr2
CROT	54677	carnitine O-octanoyltransferase	2,82	chr7
CRTAP	10491	cartilage associated protein	3,03	chr3
CRYL1	51084	crystallin, lambda 1	2,12	chr13
CSAD	51380	cysteine sulfinic acid decarboxylase	2,96	chr12
CSGlcA-T	54480	chondroitin sulfate glucuronyltransferase	7,26	chr7
CSNK1D	1453	casein kinase 1, delta	2,07	chr17
CSNK1G1	53944	casein kinase 1, gamma 1	2,41	chr15
CSPG4	1464	Chondroitin sulfate proteoglycan 4 (melanoma-associated)	13,86	chr15
CSRP1	1465	cysteine and glycine-rich protein 1	14,42	chr1
CSS3	337876	chondroitin sulfate synthase 3	24,41	chr5
CST3	1471	cystatin C (amyloid angiopathy and cerebral hemorrhage)	6,45	chr20
CTBS	1486	chitobiase, di-N-acetyl-	10,27	chr1
CTGF	1490	connective tissue growth factor	20,66	chr6
CTSB	1508	cathepsin B	17,12	chr8
CTSC	1075	cathepsin C	2,73	chr11
CTTN	2017	cortactin	4,24	chr11
CTTNBP2NL	55917	CTTNBP2 N-terminal like	2,01	chr1
CUEDC2	79004	CUE domain containing 2	2,04	chr10

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CUL4B	8450	cullin 4B	2,80	chr10
CUL5	8065	cullin 5	2,16	chr11
CUL7	9820	cullin 7	3,91	chr6
CUTL1	1523	Cut-like 1, CCAAT displacement protein (Drosophila)	2,08	chr7
CXCL1	2919	chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)	3,08	chr4
CXCL12	6387	chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)	2,80	chr10
CXorf33	139322	chromosome X open reading frame 33	3,22	chrX
CXorf39	139231	Chromosome X open reading frame 39	2,37	chrX
CXorf6	10046	chromosome X open reading frame 6	2,22	chrX
CXX1	8933	CAAX box 1	6,79	chrX
CYB5R1	51706	cytochrome b5 reductase 1	5,37	chr1
CYB5R3	1727	cytochrome b5 reductase 3	4,06	chr22
CYBASC3	220002	cytochrome b, ascorbate dependent 3	3,34	chr11
CYBRD1	79901	cytochrome b reductase 1	31,09	chr2
CYLD	1540	cylindromatosis (turban tumor syndrome)	4,52	chr16
CYP1B1	1545	cytochrome P450, family 1, subfamily B, polypeptide 1	8,47	chr2
CYP2U1	113612	cytochrome P450, family 2, subfamily U, polypeptide 1	3,83	chr4
CYR61	3491	cysteine-rich, angiogenic inducer, 61	11,63	chr1
DAAM2	23500	dishevelled associated activator of morphogenesis 2	4,30	chr6
DAB2	1601	Disabled homolog 2, mitogen-responsive phosphoprotein (Drosophila)	72,26	chr5
DAP	1611	death-associated protein	6,45	chr5
DAZAP2	9802	DAZ associated protein 2	4,86	chr12
DAZAP2	401029 /// 9802	DAZ associated protein 2 /// similar to DAZ-associated protein 2 (Deleted in azo	3,35	chr12
DBNL	28988	drebrin-like	2,02	chr7
DCBLD1	285761	discoidin, CUB and LCCL domain containing 1	6,28	chr6
DCBLD2	131566	discoidin, CUB and LCCL domain containing 2	5,97	chr3
DCTD	1635	dCMP deaminase	2,57	chr4
DCTN3	11258	dynactin 3 (p22)	4,54	chr9
DCUN1D4	23142	DCN1, defective in cullin neddylation 1, domain containing 4 (S. cerevisiae)	5,80	chr4
DDAH1	23576	dimethylarginine dimethylaminohydrolase 1	3,91	chr1
DDEF1	50807	development and differentiation enhancing factor 1	5,49	chr8
DDEF2	8853	development and differentiation enhancing factor 2	5,62	chr2
DDHD2	23259	DDHD domain containing 2	3,81	chr8
DDIT3	1649	DNA-damage-inducible transcript 3	3,99	chr12
DDR2	4921	Discoidin domain receptor family, member 2	51,24	chr1
DECR1	1666	2,4-dienoyl CoA reductase 1, mitochondrial	2,43	chr8
DEGS1	8560	degenerative spermatocyte homolog 1, lipid desaturase (Drosophila)	2,49	chr1
DFNA5	1687	deafness, autosomal dominant 5	17,62	chr7
DGKA	1606	diacylglycerol kinase, alpha 80kDa	5,45	chr12
DHRS1	115817	dehydrogenase/reductase (SDR family) member 1	2,31	chr14
DIO2	1734	Deiodinase, iodothyronine, type II	14,77	chr14
DIP13B	55198	DIP13 beta	4,09	chr12
DJ328E19.C1.1	65 /// 440670 /// 44	hypothetical protein DJ328E19.C1.1 /// hypothetical protein FLJ20719 /// hypoth	3,73	chr1_random
DJ328E19.C1.1	401967 /// 440670	hypothetical protein DJ328E19.C1.1 /// hypothetical protein FLJ20719 /// hypoth	2,88	chr1_random
DKFZP434B033	25851	DKFZP434B0335 protein	2,44	chr7
DKFZp434C032	54762	hypothetical protein DKFZp434C0328	3,29	chr3
DKFZP434F031	81575	hypothetical protein DKFZp434F0318 /// hypothetical protein DKFZp434F0318	2,96	chr12
DKFZp434K243	84216	hypothetical protein DKFZp434K2435	4,09	chr12
DKFZp434L142	51313	hypothetical protein DKFZp434L142	11,72	chr4
DKFZP564D166	26115	putative ankyrin-repeat containing protein	3,49	chr17
DKFZP564D172	83989	hypothetical protein DKFZp564D172	3,35	chr5
DKFZP564J012	25915	nuclear protein E3-3	2,15	chr3
DKFZP564J086	25923	DKFZP564J0863 protein	3,99	chr11
DKFZp564K142	84061	implantation-associated protein	2,46	chrX_random
DKFZP586D091	25895	hepatocellularcarcinoma-associated antigen HCA557a	3,18	chr12
DKFZP586H212	25891	regeneration associated muscle protease	5,16	chr11
DKFZp686K161	388957	Similar to BMP2 inducible kinase	3,12	chr2
DKFZp761B107	91050	Hypothetical protein DKFZp761B107 /// Similar to DKFZP434L187 protein	2,03	chr4
DKFZp761D112	84257	hypothetical protein DKFZp761D112	2,33	chr8
DKK1	22943	dickkopf homolog 1 (Xenopus laevis)	17,54	chr10
DKK3	27122	dickkopf homolog 3 (Xenopus laevis)	19,69	chr11
DLC1	10395	deleted in liver cancer 1	69,90	chr8
DLG1	1739	discs, large homolog 1 (Drosophila)	3,05	chr3
DLX1	1745	distal-less homeo box 1	35,47	chr2
DLX2	1746	distal-less homeo box 2	25,71	chr2
DMN	23336	desmuslin	7,70	chr15

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DNAJB12	54788	DnaJ (Hsp40) homolog, subfamily B, member 12	2,60	chr10
DNAJB14	79982	DnaJ (Hsp40) homolog, subfamily B, member 14	2,74	chr4
DNAJB4	11080	DnaJ (Hsp40) homolog, subfamily B, member 4	7,82	chr1
DNAJB9	4189	DnaJ (Hsp40) homolog, subfamily B, member 9	3,73	chr7
DNAJC1	64215	DnaJ (Hsp40) homolog, subfamily C, member 1	2,93	chr10
DNAJC13	23317	DnaJ (Hsp40) homolog, subfamily C, member 13	2,71	chr3
DNAJC3	5611	Hypothetical protein LOC144871	4,16	chr13
DNAJC6	9829	DnaJ (Hsp40) homolog, subfamily C, member 6	3,03	chr1
DNAPTP6	26010	DNA polymerase-transactivated protein 6	2,23	chr2
DNASE1L1	1774	deoxyribonuclease I-like 1	7,70	chrX
DNCLI2	1783	dynein, cytoplasmic, light intermediate polypeptide 2	2,08	chr16
DOC1	11259	downregulated in ovarian cancer 1	120,26	chr3
DOCK1	1793	dedicator of cytokinesis 1	4,20	chr10
DOCK10	55619	dedicator of cytokinesis 10	9,82	chr2
DOCK2	1794	Dedicator of cytokinesis 2	16,79	chr5
DOCK5	80005	dedicator of cytokinesis 5	3,84	chr8
DPF3	8110	D4, zinc and double PHD fingers, family 3	6,47	chr14
DPP8	54878	Dipeptidyl-peptidase 8	2,27	chr15
DPY19L1	23333	dpy-19-like 1 (C. elegans)	2,44	chr7
DPY19L4	286148	dpy-19-like 4 (C. elegans)	2,64	chr8
DPYD	1806	dihydropyrimidine dehydrogenase	33,29	chr1
DRAP1	10589	DR1-associated protein 1 (negative cofactor 2 alpha)	2,70	chr11
DSC3	1825	desmocollin 3	7,15	chr18
DSCR1	1827	Down syndrome critical region gene 1	68,24	chr21
DSP	1832	desmoplakin	3,83	chr6
DSTN	11034	Destrin (actin depolymerizing factor)	2,81	chr20
DUSP1	1843	dual specificity phosphatase 1	9,65	chr5
DUSP10	11221	dual specificity phosphatase 10	3,51	chr1
DUSP14	11072	dual specificity phosphatase 14	2,33	chr17
DUSP18	150290	dual specificity phosphatase 18	2,04	chr22
DVL3	1857	dishevelled, dsh homolog 3 (Drosophila)	3,21	chr3
DYM	54808	Dymeclin	2,10	chr18
DYRK4	8798	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 4	3,97	chr12
DYSF	8291	dysferlin, limb girdle muscular dystrophy 2B (autosomal recessive)	2,48	chr2
DZIP1	22873	DAZ interacting protein 1	2,82	chr13
EBF	1879	Early B-cell factor	2,40	chr5
EBI2	1880	Epstein-Barr virus induced gene 2 (lymphocyte-specific G protein-coupled rece	2,06	chr13
ECE1	1889	Endothelin converting enzyme 1	2,38	chr1
ECM1	1893	extracellular matrix protein 1	8,48	chr1
ECM2	1842	extracellular matrix protein 2, female organ and adipocyte specific	2,46	chr9
EDEM1	9695	ER degradation enhancer, mannosidase alpha-like 1	4,99	chr3
EDG2	1902	endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 2	13,99	chr9
EDG3	1903	endothelial differentiation, sphingolipid G-protein-coupled receptor, 3	5,42	chr9
EDIL3	10085	EGF-like repeats and discoidin I-like domains 3	6,80	chr5
EDN1	1906	endothelin 1	3,78	chr6
EDNRA	1909	endothelin receptor type A	5,23	chr4
EEA1	8411	early endosome antigen 1, 162kD	2,68	chr12
EEF1D	1936	Eukaryotic translation elongation factor 1 delta (guanine nucleotide exchange p	2,69	chr8
EFEMP1	2202	EGF-containing fibulin-like extracellular matrix protein 1	23,35	chr2
EFEMP2	30008	EGF-containing fibulin-like extracellular matrix protein 2	15,26	chr11
EFHA2	286097	EF-hand domain family, member A2	5,77	chr8
EGFL5	1955	EGF-like-domain, multiple 5	3,04	chr9
EGFR	1956	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncoge	15,05	chr7
EGR1	1958	Early growth response 1	3,24	chr5
EHD1	10938	EH-domain containing 1	4,00	chr11
EHD2	30846	EH-domain containing 2	24,04	chr1
EHD3	30845	EH-domain containing 3	4,30	chr2
EHD4	30844	EH-domain containing 4	3,75	chr15
EIF1	10209	Eukaryotic translation initiation factor 1	2,81	chr17
EIF2C2	27161	Eukaryotic translation initiation factor 2C, 2	6,05	chr15
EIF2S1	1965	eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa	4,40	chr14
EIF5A2	56648	eukaryotic translation initiation factor 5A2	4,68	chr3
ELF1	1997	E74-like factor 1 (ets domain transcription factor)	2,32	chr13
ELF4	2000	E74-like factor 4 (ets domain transcription factor)	12,20	chrX
ELK3	2004	ELK3, ETS-domain protein (SRF accessory protein 2)	10,83	chr12
ELL2	22936	elongation factor, RNA polymerase II, 2	4,14	chr1

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ELMOD2	255520	ELMO domain containing 2	2,78	chr4
ELOVL1	64834	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 1	5,70	chr1
ELOVL2	54898	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 2	2,14	chr6
ELTD1	64123	EGF, latrophilin and seven transmembrane domain containing 1	4,27	chr1
EMILIN1	11117	elastin microfibril interfacer 1	12,99	chr2
EMP1	2012	epithelial membrane protein 1	52,02	chr12
EMP3	2014	epithelial membrane protein 3	14,12	chr19
ENAH	55740	enabled homolog (Drosophila)	4,24	chr1
ENC1	8507	ectodermal-neural cortex (with BTB-like domain)	13,67	chr5
ENG	2022	endoglin (Osler-Rendu-Weber syndrome 1)	3,87	chr9
ENTPD4	9583	ectonucleoside triphosphate diphosphohydrolase 4	2,82	chr8
ENTPD5	957	Ectonucleoside triphosphate diphosphohydrolase 5	2,93	chr14
EPAS1	2034	endothelial PAS domain protein 1	51,27	chr2
EPB41L1	2036	Erythrocyte membrane protein band 4.1-like 1	4,95	chr5
EPB41L3	23136	erythrocyte membrane protein band 4.1-like 3	6,18	chr18
EPHA2	1969	EPH receptor A2	4,81	chr1
EPHA5	2044	EPH receptor A5	6,44	chr4
EPHB2	2048	EPH receptor B2	4,63	chr1
EPIM	2054	epimorphin	2,12	chr12
EPLIN	51474	epithelial protein lost in neoplasm beta	6,59	chr12
EPM2AIP1	9852	EPM2A (laforin) interacting protein 1	3,88	chr3
EPRS	2058	glutamyl-prolyl-tRNA synthetase	2,44	chr1
EPS15L1	58513	epidermal growth factor receptor pathway substrate 15-like 1	2,32	chr19
EPS8	2059	epidermal growth factor receptor pathway substrate 8	11,93	chr12
ERBB2IP	55914	erbb2 interacting protein	4,29	chr5
ERO1L	30001	ERO1-like (S. cerevisiae)	2,78	chr14
ERRFI1	54206	ERBB receptor feedback inhibitor 1	3,50	chr1
ETHE1	23474	ethylmalonic encephalopathy 1	3,35	chr19
ETS1	2113	v-ets erythroblastosis virus E26 oncogene homolog 1 (avian)	2,07	chr11
ETV5	2119	ets variant gene 5 (ets-related molecule)	2,34	chr3
ETV6	2120	ets variant gene 6 (TEL oncogene)	2,17	chr12
EVC	2121	Ellis van Creveld syndrome	3,60	chr4
EVI1	2122	ecotropic viral integration site 1	9,76	chr3
EVI5	7813	ecotropic viral integration site 5	8,09	chr1
EXT1	2131	Exostoses (multiple) 1	6,55	chr8
EXT2	2132	exostoses (multiple) 2	2,27	chr11
F25965	55957	protein F25965	3,09	chr19
F2R	2149	coagulation factor II (thrombin) receptor	7,70	chr5
F2RL2	2151	coagulation factor II (thrombin) receptor-like 2	79,14	chr5
FAM14A	83982	family with sequence similarity 14, member A	2,10	chr14
FAM18B	51030	family with sequence similarity 18, member B	3,53	chr16
FAM38A	9780	family with sequence similarity 38, member A	3,85	chr16
FAM43A	131583	family with sequence similarity 43, member A	2,78	chr3
FAM46A	55603	family with sequence similarity 46, member A	9,30	chr6
FAM54B	56181	family with sequence similarity 54, member B	2,01	chr1
FAM55C	91775	family with sequence similarity 55, member C	7,99	chr3
FAM62B	57488	family with sequence similarity 62 (C2 domain containing) member B	2,04	chr7
FAM65A	79567	family with sequence similarity 65, member A	2,40	chr16
FAM73A	374986	family with sequence similarity 73, member A	3,98	chr1
FAM79A	127262	family with sequence similarity 79, member A	2,26	chr1
FAM89B	23625	family with sequence similarity 89, member B	3,96	chr11
FAM8A1	51439	family with sequence similarity 8, member A1	3,51	chr6
FAM91A1	157769	family with sequence similarity 91, member A1	2,12	chr8
FAP	2191	fibroblast activation protein, alpha	50,54	chr2
FAS	355	Fas (TNF receptor superfamily, member 6)	12,93	chr10
FAT4	79633	FAT tumor suppressor homolog 4 (Drosophila)	2,38	chr4
FBLIM1	54751	filamin binding LIM protein 1	3,76	chr1
FBLN1	2192	fibulin 1	2,80	chr22
FBLN2	2199	fibulin 2	5,51	chr3
FBLN5	10516	fibulin 5	4,89	chr14
FBN1	2200	fibrillin 1 (Marfan syndrome)	181,73	chr15
FBN2	2201	fibrillin 2 (congenital contractural arachnodactyly)	12,59	chr5
FBXL17	64839	F-box and leucine-rich repeat protein 17	4,70	chr5
FBXL2	25827	F-box and leucine-rich repeat protein 2	2,70	chr3
FBXL3	26224	F-box and leucine-rich repeat protein 3	3,82	chr13
FBXL5	26234	F-box and leucine-rich repeat protein 5	3,24	chr4

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FBXO3	26273	F-box protein 3	2,32	chr11
FBXO32	114907	F-box protein 32	4,52	chr8
FBXO6	26270	F-box protein 6	2,71	chr1
FBXO8	26269	F-box protein 8	3,50	chr4
FCGRT	2217	Fc fragment of IgG, receptor, transporter, alpha	2,18	chr19
FCHSD2	9873	FCH and double SH3 domains 2	5,48	chr11
FCMD	2218	Fukuyama type congenital muscular dystrophy (fukutin)	2,48	chr9
FER1L3	26509	fer-1-like 3, myoferlin (C. elegans)	125,57	chr10
FGF1	2246	fibroblast growth factor 1 (acidic)	4,58	chr5
FGF5	2250	fibroblast growth factor 5	2,61	chr4
FGFR1OP2	26127	FGFR1 oncogene partner 2	4,33	chr12
FHL1	2273	four and a half LIM domains 1	4,26	chrX
FHL2	2274	four and a half LIM domains 2	6,90	chr2
FHL3	2275	four and a half LIM domains 3	2,28	chr1
FKBP14	55033	FK506 binding protein 14, 22 kDa	10,09	chr7
FKBP7	51661	FK506 binding protein 7	12,51	chr2
FKBP9	11328	FK506 binding protein 9, 63 kDa	11,51	chr7
FLI1	2313	Friend leukemia virus integration 1	17,02	chr11
FLJ10260	55106	likely ortholog of mouse schlafen 3	2,48	chr17
FLJ10357	55701	hypothetical protein FLJ10357	2,57	chr14
FLJ10808	55236	hypothetical protein FLJ10808	3,01	chr4
FLJ10980	56204	hypothetical protein FLJ10980	3,23	chr15
FLJ11151	55313	Hypothetical protein FLJ11151	3,59	chr16
FLJ11259	55332	hypothetical protein FLJ11259	7,14	chr12
FLJ11273	54664	hypothetical protein FLJ11273	2,96	chr7
FLJ12649	79649	hypothetical protein FLJ12649	2,23	chrX
FLJ12681	64788	hypothetical protein FLJ12681	3,33	chr16
FLJ13391	84141	hypothetical protein FLJ13391	7,47	chr2
FLJ13448	80219	hypothetical protein FLJ13448	2,20	chr2
FLJ13710	79875	hypothetical protein FLJ13710	5,47	chr15
FLJ13855	65264	hypothetical protein FLJ13855	2,93	chr17
FLJ13868	64755	hypothetical protein FLJ13868	2,43	chr16
FLJ14001	79730	Hypothetical protein FLJ14001	3,12	chr4
FLJ14054	79614	hypothetical protein FLJ14054	10,80	chr5
FLJ14213	79899	hypothetical protein FLJ14213	4,97	chr11
FLJ14525	84886	hypothetical protein FLJ14525	4,69	chr1
FLJ14640	84902	hypothetical protein FLJ14640	2,58	chr19
FLJ14800	84926	hypothetical protein FLJ14800	2,20	chr12
FLJ20054	54530	hypothetical protein FLJ20054	3,11	chr1
FLJ20186	54849	hypothetical protein FLJ20186	2,31	chr16
FLJ20254	54867	Hypothetical protein FLJ20254	3,45	chr2
FLJ20294	55626	Hypothetical protein FLJ20294	2,25	chr6
FLJ20298	54885	FLJ20298 protein	11,01	chrX
FLJ20481	54947	hypothetical protein FLJ20481	11,80	chr16
FLJ20507	55654	hypothetical protein FLJ20507	2,58	chr2
FLJ20719	440673 /// 55672	hypothetical protein FLJ20719 /// AG1 protein	2,76	chr1_random
FLJ20719	440670 /// 44067	hypothetical protein FLJ20719 /// hypothetical protein LOC200030 /// hypothetic	2,42	chr1
FLJ20719	70 /// 440673 /// 4	hypothetical protein FLJ20719 /// hypothetical protein MGC8902 /// AE01 mRNA	2,33	chr1
FLJ20920	80221	hypothetical protein FLJ20920	3,25	chr17
FLJ21075	80099	hypothetical protein FLJ21075	2,23	chr7
FLJ21127	79600	hypothetical protein FLJ21127	2,08	chr12
FLJ21159	79884	ASAP	2,55	chr4
FLJ21657	64417	hypothetical protein FLJ21657	2,99	chr5
FLJ21827	56912	hypothetical protein FLJ21827	2,35	chr11
FLJ21986	79974	hypothetical protein FLJ21986	20,43	chr7
FLJ22028	79912	hypothetical protein FLJ22028	3,38	chr12
FLJ22222	79701	hypothetical protein FLJ22222	2,66	chr17
FLJ22313	64224	hypothetical protein FLJ22313	2,21	chr7
FLJ22471	80212	limkain beta 2	18,90	chr12
FLJ22833	64859	hypothetical protein FLJ22833	29,06	chr2
FLJ22965	63932	hypothetical protein FLJ22965	2,02	chrX
FLJ23514	60494	hypothetical protein FLJ23514	2,32	chr11
FLJ23518	79780	hypothetical protein FLJ23518	2,51	chr11
FLJ23867	200058	hypothetical protein FLJ23867	2,65	chr1
FLJ30594	150622	hypothetical locus FLJ30594	3,70	chr17
FLJ30596	133686	hypothetical protein FLJ30596	2,77	chr5

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FLJ30851	375190	FLJ30851 protein	2,03	chr2
FLJ31033	91351	hypothetical protein FLJ31033	2,62	chr4
FLJ34236	283373	hypothetical protein FLJ34236	2,11	chr12
FLJ34922	91607	likely ortholog of mouse schlafen 8/9	3,11	chr17
FLJ36031	168455	Hypothetical protein FLJ36031	10,77	chr7
FLJ36748	134265	hypothetical protein FLJ36748	2,42	chr5
FLJ37562	134553	hypothetical protein FLJ37562	14,25	chr5
FLJ38101	255919	hypothetical protein FLJ38101	2,28	chr16
FLJ38725	144811	hypothetical protein FLJ38725	7,54	chr13
FLJ39370	132720	hypothetical protein FLJ39370	6,14	chr4
FLJ39378	353116	hypothetical protein FLJ39378	3,15	chr12
FLJ39441	144108	hypothetical protein FLJ39441	2,18	chr11
FLJ42709	441094	hypothetical gene supported by AK124699	2,30	chr5
FLJ43339	388115	FLJ43339 protein	4,21	chr15
FLJ44635	392490	TPT1-like protein	2,26	chrX
FLJ45831	400576	FLJ45831 protein /// MRNA; cDNA DKFZp564A222 (from clone DKFZp564A22	4,50	chr2
FLJ90166	164284	hypothetical protein FLJ90166	7,80	chr20
FLNA	2316	filamin A, alpha (actin binding protein 280)	6,93	chrX
FLNB	2317	filamin B, beta (actin binding protein 278)	2,06	chr3
FLNC	2318	filamin C, gamma (actin binding protein 280)	9,72	chr7
FLYWCH1	84256	FLYWCH-type zinc finger 1	3,14	chr16
FMN2	56776	formin 2	6,91	chr1
FN1	2335	fibronectin 1	178,10	chr2
FNDC3B	64778	fibronectin type III domain containing 3B	7,30	chr3
FOSL1	8061	FOS-like antigen 1	3,19	chr11
FOSL2	2355	FOS-like antigen 2	15,44	chr2
FOXC1	2296	forkhead box C1	8,78	chr6
FOXD1	2297	forkhead box D1	25,91	chr5
FOXF1	2294	forkhead box F1	8,38	chr16
FOXF2	2295	forkhead box F2	3,12	chr6
FOXJ2	55810	forkhead box J2	2,42	chr12
FOXK1	221937	Forkhead box K1	2,53	chr7
FOXL1	2300	Forkhead box L1	6,23	chr16
FOXP1	27086	Forkhead box P1	5,07	chr3
FREQ	23413	Frequenin homolog (Drosophila)	2,16	chr9
FRMD4A	55691	FERM domain containing 4A	6,77	chr10
FRMD6	122786	FERM domain containing 6	49,90	chr14
FRS2	10818	Fibroblast growth factor receptor substrate 2	2,35	chr12
FSTL1	11167	follistatin-like 1	4,78	chr3
FSTL3	10272	follistatin-like 3 (secreted glycoprotein)	6,37	chr19
FTH1	2495	ferritin, heavy polypeptide 1	2,38	chr11
FTL	2512	Ferritin, light polypeptide	2,50	chrX
FUT6	2528	Fucosyltransferase 6 (alpha (1,3) fucosyltransferase)	2,79	chr16
FVT1	2531	Follicular lymphoma variant translocation 1	3,31	chr18
FXYD5	53827	FXYD domain containing ion transport regulator 5	3,33	chr19
FYCO1	79443	FYVE and coiled-coil domain containing 1	3,80	chr3
FYTTD1	84248	forty-two-three domain containing 1	6,14	chr3
FZD1	8321	frizzled homolog 1 (Drosophila)	5,79	chr7
FZD2	2535	frizzled homolog 2 (Drosophila)	7,48	chr17
FZD6	8323	frizzled homolog 6 (Drosophila)	5,16	chr8
GABARAP	11337	GABA(A) receptor-associated protein	2,04	chr17
GABRB1	2560	gamma-aminobutyric acid (GABA) A receptor, beta 1	2,41	chr4
GADD45A	1647	growth arrest and DNA-damage-inducible, alpha	11,34	chr1
GADD45B	4616	growth arrest and DNA-damage-inducible, beta	13,14	chr19
GALNACT-2	55454	chondroitin sulfate GalNAcT-2	6,52	chr10
GALNT10	55568	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltrans	21,41	chr5
GALNT2	2590	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltrans	6,45	chr1
GALNT4	8693	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltrans	3,36	chr12
GALNT5	11227	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltrans	6,70	chr2
GANAB	23193	glucosidase, alpha; neutral AB	2,08	chr11
GAS2L1	10634	growth arrest-specific 2 like 1	3,98	chr22
GAS6	2621	growth arrest-specific 6	13,68	chr13
GATA2	2624	GATA binding protein 2	5,09	chr3
GATA6	2627	GATA binding protein 6	9,85	chr18
GBA	2629	Glucosidase, beta; acid (includes glucosylceramidase)	4,52	chr1
GBA /// GBAP	2629 /// 2630	glucosidase, beta; acid (includes glucosylceramidase) /// glucosidase, beta; aci	2,77	chr1

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GBA2	57704	Glucosidase, beta (bile acid) 2	3,15	chr9
GBE1	2632	glucan (1,4-alpha-), branching enzyme 1 (glycogen branching enzyme, Anders	5,34	chr3
GBP1	2633	guanylate binding protein 1, interferon-inducible, 67kDa	28,18	chr1
GBP2	2634	guanylate binding protein 2, interferon-inducible /// guanylate binding protein 2,	3,60	chr1
GBP3	2635	guanylate binding protein 3	34,83	chr1
GDF15	9518	growth differentiation factor 15	17,75	chr19
GEM	2669	GTP binding protein overexpressed in skeletal muscle	4,85	chr8
GFPT1	2673	glutamine-fructose-6-phosphate transaminase 1	2,82	chr2
GGH	8836	gamma-glutamyl hydrolase (conjugase, folylpolygammaglutamyl hydrolase)	2,13	chr8
GHR	2690	growth hormone receptor	2,30	chr5
GIT2	9815	G protein-coupled receptor kinase interactor 2	3,76	chr12
GLIPR1	11010	GLI pathogenesis-related 1 (glioma)	110,49	chr12
GLIS1	148979	GLIS family zinc finger 1	2,87	chr1
GLIS3	169792	GLIS family zinc finger 3	11,17	chr9
GLRB	2743	glycine receptor, beta	3,68	chr4
GLRX	2745	glutaredoxin (thioltransferase)	2,97	chr14
GLRX2	51022	glutaredoxin 2	3,23	chr1
GLS	2744	glutaminase	17,00	chr2
GLT8D1	55830	glycosyltransferase 8 domain containing 1	2,60	chr3
GLT8D2	83468	glycosyltransferase 8 domain containing 2	12,49	chr12
GLTP	51228	glycolipid transfer protein	2,84	chr12
GlyBP	9731	glycine-, glutamate-, thienylcyclohexylpiperidine-binding protein	3,62	chr1
GNA11	2767	Guanine nucleotide binding protein (G protein), alpha 11 (Gq class)	2,96	chr19
GNAI1	2770	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypepti	2,56	chr7
GNAI2	2771	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypepti	2,96	chr3
GNAO1	2775	guanine nucleotide binding protein (G protein), alpha activating activity polypep	2,19	chr16
GNB1	2782	guanine nucleotide binding protein (G protein), beta polypeptide 1	3,97	chr1
GNB4	59345	guanine nucleotide binding protein (G protein), beta polypeptide 4	2,63	chr3
GNE	10020	glucosamine (UDP-N-acetyl)-2-epimerase/N-acetylmannosamine kinase	2,37	chr9
GNG11	2791	guanine nucleotide binding protein (G protein), gamma 11	4,07	chr7
GNG12	55970	guanine nucleotide binding protein (G protein), gamma 12	28,04	chr1
GNPDA2	132789	glucosamine-6-phosphate deaminase 2	4,78	chr4
GNS	2799	glucosamine (N-acetyl)-6-sulfatase (Sanfilippo disease IIID)	6,57	chr12
GOLGA2	2801	golgi autoantigen, golgin subfamily a, 2	2,99	chr9
GOLGA3	2802	golgi autoantigen, golgin subfamily a, 3	3,30	chr12
GOLGB1	2804	Golgi autoantigen, golgin subfamily b, macrogolgin (with transmembrane signal	2,12	chr3
GOLPH4	27333	golgi phosphoprotein 4	3,03	chr3
GOLT1B	51026	golgi transport 1 homolog B (S. cerevisiae)	7,34	chr12
GOPC	57120	Golgi associated PDZ and coiled-coil motif containing	3,65	chr6
GOSR1	9527	golgi SNAP receptor complex member 1	2,31	chr17
GOSR2	9570	Golgi SNAP receptor complex member 2	2,39	chr17
GPC1	2817	glypican 1	5,86	chr2
GPR124	25960	G protein-coupled receptor 124	6,41	chr8
GPR126	57211	G protein-coupled receptor 126	3,17	chr6
GPR155	151556	G protein-coupled receptor 155	5,24	chr2
GPR161	23432	G protein-coupled receptor 161	3,67	chr1
GPRC5A	9052	G protein-coupled receptor, family C, group 5, member A	17,86	chr12
GPSM1	26086	G-protein signalling modulator 1 (AGS3-like, C. elegans)	5,25	chr9
GREM1	26585	gremlin 1, cysteine knot superfamily, homolog (Xenopus laevis)	400,20	chr15
GRK5	2869	G protein-coupled receptor kinase 5	5,38	chr10
GRN	2896	granulin	2,32	chr17
GSK3B	2932	Glycogen synthase kinase 3 beta	4,02	chr3
GSN	2934	gelsolin (amyloidosis, Finnish type)	5,06	chr9
GSTK1	373156	glutathione S-transferase kappa 1	2,08	chr7
GSTM2	2946	glutathione S-transferase M2 (muscle)	2,11	chr1
GSTM3	2947	glutathione S-transferase M3 (brain)	21,84	chr1
GTF2H1	2965	general transcription factor IIH, polypeptide 1, 62kDa	2,29	chr11
GTPBP5	26164	GTP binding protein 5 (putative)	2,86	chr20
GUK1	2987	guanylate kinase 1 /// guanylate kinase 1	2,41	chr1
H2AFY	9555	H2A histone family, member Y	3,70	chr5
H6PD	9563	hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)	4,63	chr1
HABP4	22927	hyaluronan binding protein 4	2,84	chr9
HAPLN1	1404	Hyaluronan and proteoglycan link protein 1	5,76	chr5
HBEGF	1839	heparin-binding EGF-like growth factor	11,83	chr5
HBP1	26959	HMG-box transcription factor 1	2,71	chr7
HCFC2	29915	host cell factor C2	3,62	chr12

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HDLBP	3069	high density lipoprotein binding protein (vigilin)	3,06	chr2
HECA	51696	headcase homolog (Drosophila)	2,68	chr6
HECTD2	143279	HECT domain containing 2	2,37	chr10
HECW2	57520	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 2	3,40	chr2
HEG1	57493	HEG homolog 1 (zebrafish)	25,65	chr3
HERC4	26091	hect domain and RLD 4	2,76	chr10
HERPUD1	9709	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like d	9,52	chr16
HEXIM1	10614	hexamethylene bis-acetamide inducible 1	2,18	chr17
HEY1	23462	hairy/enhancer-of-split related with YRPW motif 1	2,36	chr8
HIF1A	3091	hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription fac	2,04	chr14
HIPK2	28996	Homeodomain interacting protein kinase 2	3,01	chr7
HIST1H2BC	8347	histone 1, H2bc	2,42	chr6
HIST1H4H	8365	histone 1, H4h	2,57	chr6
HIVEP3	59269	Human immunodeficiency virus type I enhancer binding protein 3	2,40	chr1
HLA-B	3106	major histocompatibility complex, class I, B	2,92	chr6
HLA-C	3107	major histocompatibility complex, class I, C	2,61	chr6
HLA-E	3133	major histocompatibility complex, class I, E	5,94	chr6
HLX1	3142	H2.0-like homeo box 1 (Drosophila)	2,35	chr1
HMCN1	83872	hemicentin 1	12,20	chr1
HNRPLL	92906	heterogeneous nuclear ribonucleoprotein L-like	2,32	chr2
HNRPUL2	221092	heterogeneous nuclear ribonucleoprotein U-like 2	2,01	chr11
HNT	50863	neurotrimin	14,49	chr11
HOMER3	9454	homer homolog 3 (Drosophila)	2,37	chr19
HOM-TES-103	25900	HOM-TES-103 tumor antigen-like	2,52	chr12
HOOK3	84376	Hook homolog 3 (Drosophila)	2,95	chr8
HOXB2	3212	homeo box B2	4,42	chr17
HOXB7	3217	homeo box B7	2,76	chr17
HP1BP3	50809	heterochromatin protein 1, binding protein 3	2,30	chr1
HPCAL1	3241	hippocalcin-like 1	3,08	chr2
HRH1	3269	histamine receptor H1	9,88	chr3
HRMT1L1	3275	HMT1 hnRNP methyltransferase-like 1 (S. cerevisiae)	3,10	chr21
HSPA5	3309	heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)	5,63	chr9
HSPB1	3315	heat shock 27kDa protein 1	11,96	chr7
HSPB8	26353	heat shock 22kDa protein 8	9,67	chr12
HSPG2	3339	heparan sulfate proteoglycan 2 (perlecan)	4,94	chr1
HT008	55852	uncharacterized hypothalamus protein HT008	2,11	chr17
HTRA1	5654	HtrA serine peptidase 1	7,83	chr10
IBRDC1	154214	IBR domain containing 1	3,31	chr6
ICHTHYIN	348938	ichthyin protein	7,55	chr5
ICK	22858	intestinal cell (MAK-like) kinase	2,16	chr6
ID3	3399	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	2,79	chr1
IDH2	3418	isocitrate dehydrogenase 2 (NADP+), mitochondrial	2,20	chr15
IDS	3423	iduronate 2-sulfatase (Hunter syndrome)	6,12	chrX
IER3	8870	immediate early response 3	22,38	chr6
IER3IP1	51124	immediate early response 3 interacting protein 1	2,60	chr18
IER5	51278	immediate early response 5	5,96	chr1
IER5L	389792	immediate early response 5-like	6,44	chr9
IFI16	3428	interferon, gamma-inducible protein 16	36,68	chr1
IFIT2	3433	interferon-induced protein with tetratricopeptide repeats 2	2,94	chr10
IFIT3	3437	Interferon-induced protein with tetratricopeptide repeats 3	3,61	chr10
IFIT5	24138	interferon-induced protein with tetratricopeptide repeats 5	4,05	chr10
IFNAR1	3454	interferon (alpha, beta and omega) receptor 1	4,25	chr21
IFNGR2	3460	interferon gamma receptor 2 (interferon gamma transducer 1)	2,13	chr21
IFT20	90410	intraflagellar transport protein IFT20	3,44	chr17
IGFBP3	3486	insulin-like growth factor binding protein 3	28,09	chr7
IGFBP4	3487	insulin-like growth factor binding protein 4	4,71	chr17
IGFBP5	3488	insulin-like growth factor binding protein 5	142,96	chr2
IGFBP6	3489	insulin-like growth factor binding protein 6	7,75	chr12
IGFBP7	3490	insulin-like growth factor binding protein 7	343,83	chr4
IKBKE	9641	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon	2,48	chr1
IKIP	121457	IKK interacting protein	18,59	chr12
IL10RB	3588	interleukin 10 receptor, beta	6,65	chr21
IL11	3589	interleukin 11	5,73	chr19
IL11RA	3590	interleukin 11 receptor, alpha	2,79	chr9
IL13RA1	3597	interleukin 13 receptor, alpha 1	11,07	chrX
IL15	3600	interleukin 15	3,11	chr4

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IL1R1	3554	interleukin 1 receptor, type I	20,71	chr2
IL1RAP	3556	interleukin 1 receptor accessory protein	2,59	chr3
IL6	3569	interleukin 6 (interferon, beta 2)	3,36	chr7
IL6ST	3572	interleukin 6 signal transducer (gp130, oncostatin M receptor)	18,73	chr17
IL7R	3575	Interleukin 7 receptor	9,35	chr5
IL8	3576	interleukin 8	14,71	chr4
ILK	3611	integrin-linked kinase	3,30	chr11
IMPAD1	54928	inositol monophosphatase domain containing 1	4,98	chr8
IMPDH1	3614	IMP (inosine monophosphate) dehydrogenase 1	2,30	chr7
ING4	51147	inhibitor of growth family, member 4	3,14	chr12
INHBA	3624	inhibin, beta A (activin A, activin AB alpha polypeptide)	113,49	chr7
INPP1	3628	inositol polyphosphate-1-phosphatase	4,14	chr2
INPP4B	8821	inositol polyphosphate-4-phosphatase, type II, 105kDa	7,24	chr4
INPP5A	3632	inositol polyphosphate-5-phosphatase, 40kDa	2,00	chr10
IPP	3652	intracisternal A particle-promoted polypeptide	4,28	chr1
IQWD1	55827	IQ motif and WD repeats 1	3,48	chr1
IRAK2	3656	interleukin-1 receptor-associated kinase 2	4,82	chr3
IRF2BP2	359948	interferon regulatory factor 2 binding protein 2	3,69	chr1
ISGF3G	10379	interferon-stimulated transcription factor 3, gamma 48kDa	2,21	chr14
ITCH	83737	itchy homolog E3 ubiquitin protein ligase (mouse)	2,85	chr20
ITGA11	22801	integrin, alpha 11	12,78	chr15
ITGA2	3673	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)	8,92	chr5
ITGA3	3675	integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)	6,45	chr17
ITGA4	3676	integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	9,27	chr2
ITGA5	3678	integrin, alpha 5 (fibronectin receptor, alpha polypeptide)	14,20	chr12
ITGAV	3685	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)	10,17	chr2
ITGB1	3688	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes M	8,89	chr10
ITGB1BP1	9270	integrin beta 1 binding protein 1	3,04	chr2
ITGB3	3690	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	3,21	chr17
ITM2B	9445	integral membrane protein 2B	2,02	chr13
ITPR2	3709	Family with sequence similarity 20, member C	2,21	chr12
JAK1	3716 /// 391045	Janus kinase 1 (a protein tyrosine kinase) /// similar to Solute carrier family 2, fa	9,31	chr1
JAK1	3716	Janus kinase 1 (a protein tyrosine kinase)	5,81	chr1
JAK2	3717	Janus kinase 2 (a protein tyrosine kinase)	2,41	chr9
JAZF1	221895	juxtaposed with another zinc finger gene 1	2,18	chr7
JRKL	8690	jerky homolog-like (mouse)	2,56	chr11
JUB	84962	jub, ajuba homolog (Xenopus laevis)	4,38	chr14
JUN	3725	v-jun sarcoma virus 17 oncogene homolog (avian)	5,16	chr1
JUND	3727	jun D proto-oncogene	2,01	chr19
KATNAL1	84056	katanin p60 subunit A-like 1	3,79	chr13
KBTBD9	114818	kelch repeat and BTB (POZ) domain containing 9	5,22	chr2
KCNG1	3755	potassium voltage-gated channel, subfamily G, member 1	3,92	chr20
KCNMA1	3778	potassium large conductance calcium-activated channel, subfamily M, alpha m	18,21	chr10
KCTD10	83892	potassium channel tetramerisation domain containing 10	3,83	chr12
KCTD11	147040	potassium channel tetramerisation domain containing 11	2,09	chr17
KCTD18	130535	potassium channel tetramerisation domain containing 18	4,78	chr2
KCTD9	54793	potassium channel tetramerisation domain containing 9	2,44	chr9
KDELR2	11014	KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 2	4,73	chr7
KDELR3	11015	KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 3	43,78	chr22
KIAA0063	9929	KIAA0063 gene product	2,75	chr22
KIAA0090	23065	KIAA0090	2,14	chr1
KIAA0143	23167	KIAA0143 protein	2,03	chr8
KIAA0247	9766	KIAA0247	3,91	chr14
KIAA0256	9728	KIAA0256 gene product	2,42	chr15
KIAA0265	23008	KIAA0265 protein	2,95	chr7
KIAA0268	77 /// 375056 /// 4	C219-reactive peptide /// AAAP6077 /// similar to C219-reactive peptide	2,32	chr1_random
KIAA0310	9919	KIAA0310	2,07	chr9
KIAA0323	23351	KIAA0323	2,69	chr14
KIAA0372	9652	KIAA0372	4,17	chr5
KIAA0427	9811	KIAA0427	4,02	chr18
KIAA0470	9859	KIAA0470	2,15	chr4
KIAA0527	26032	KIAA0527 protein	2,69	chr3
KIAA0543	23145	likely ortholog of mouse SCO-spondin	2,03	chr7
KIAA0652	9776	KIAA0652 gene product	3,19	chr11
KIAA0690	23223	KIAA0690	4,25	chr10
KIAA0692	23141	KIAA0692 protein	2,19	chr12

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
KIAA0738	9747	KIAA0738 gene product	3,83	chr7
KIAA0776	23376	KIAA0776	2,88	chr6
KIAA0802	23255	KIAA0802	2,25	chr18
KIAA0830	23052	KIAA0830 protein	20,43	chr11
KIAA0882	23158	KIAA0882 protein	28,31	chr4
KIAA0934	22982	KIAA0934	4,12	chr10
KIAA0992	23022	palladin	17,41	chr4
KIAA1040	23041	KIAA1040 protein	2,82	chr12
KIAA1043	23331	KIAA1043 protein	2,12	chr22
KIAA1055	23102	KIAA1055 protein	2,42	chr15
KIAA1128	54462	KIAA1128	3,63	chr10
KIAA1181	57222	endoplasmic reticulum-golgi intermediate compartment 32 kDa protein	6,03	chr5
KIAA1199	57214	KIAA1199	90,25	chr15
KIAA1404	57169	KIAA1404 protein	2,00	chr20
KIAA1432	57589	KIAA1432	4,51	chr9
KIAA1434	56261	hypothetical protein KIAA1434	2,23	chr20
KIAA1458	57606	KIAA1458 protein	2,67	chr4
KIAA1462	57608	KIAA1462	4,78	chr10
KIAA1539	80256	KIAA1539	4,18	chr9
KIAA1546	57667	KIAA1546 protein	4,97	chr4
KIAA1600	57700	KIAA1600	4,24	chr10
KIAA1632	57724	KIAA1632	3,06	chr18
KIAA1704	55425	KIAA1704	2,31	chr13
KIAA1715	80856	KIAA1715	5,84	chr2
KIAA1729	85460	KIAA1729 protein	4,80	chr4
KIAA1754	85450	KIAA1754	2,75	chr10
KIAA1838	84498	KIAA1838	2,23	chr6
KIAA1856	84629	KIAA1856 protein	2,95	chr7
KIAA1912	114800	KIAA1912 protein	6,59	chr2
KIAA1913	114801	KIAA1913	2,60	chr6
KIAA1949	170954	KIAA1949	7,66	chr6
KIAA1961	96459	KIAA1961 gene	2,24	chr5
KIAA1971	123720	similar to junction-mediating and regulatory protein p300 JMY	2,72	chr15
KIAA1972	89970	KIAA1972 protein	2,26	chr16
KIF5B	3799	kinesin family member 5B	3,38	chr10
KIFAP3	22920	kinesin-associated protein 3	4,57	chr1
KIRREL	55243	kin of IRRE like (Drosophila)	4,40	chr1
KITLG	4254	KIT ligand	12,81	chr12
KLF10	7071	Kruppel-like factor 10	2,88	chr8
KLF12	11278	Kruppel-like factor 12	3,71	chr13
KLF2	10365	Kruppel-like factor 2 (lung)	2,68	chr19
KLF3	51274	Kruppel-like factor 3 (basic)	2,07	chr4
KLF6	1316	Kruppel-like factor 6	6,00	chr10
KLF7	8609	Kruppel-like factor 7 (ubiquitous)	3,30	chr2
KLF9	687	Kruppel-like factor 9	11,19	chr9
KLHDC5	57542	kelch domain containing 5	3,14	chr12
KLHL20	27252	kelch-like 20 (Drosophila)	2,41	chr1
KLHL5	51088	Kelch-like 5 (Drosophila)	5,51	chr4
KLHL8	57563	kelch-like 8 (Drosophila)	2,32	chr4
KLHL9	55958	kelch-like 9 (Drosophila)	3,53	chr9
KPNA1	3836	karyopherin alpha 1 (importin alpha 5)	3,03	chr3
KPNB1	3837	Karyopherin (importin) beta 1	2,47	chr17
KRT10	3858	keratin 10 (epidermolytic hyperkeratosis; keratosis palmaris et plantaris)	2,53	chr17
KRTAP2-1	81872	keratin associated protein 2-1	10,76	chr17_random
L3MBTL3	84456	l(3)mbt-like 3 (Drosophila)	2,26	chr6
LACTB	114294	lactamase, beta	2,37	chr15
LAMA4	3910	laminin, alpha 4	8,96	chr6
LAMB1	3912	laminin, beta 1	3,05	chr7
LAMB2	3913	laminin, beta 2 (laminin S)	6,62	chr3
LAMC1	3915	laminin, gamma 1 (formerly LAMB2)	4,84	chr1
LAMP2	3920	lysosomal-associated membrane protein 2	6,02	chrX
LARP6	55323	La ribonucleoprotein domain family, member 6	7,55	chr15
LASP1	3927	LIM and SH3 protein 1	3,61	chr17
LATS2	26524	LATS, large tumor suppressor, homolog 2 (Drosophila)	2,71	chr13
LDB3	11155	LIM domain binding 3	14,73	chr10
LENG4	79143	leukocyte receptor cluster (LRC) member 4	2,11	chr19

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LEPR	3953	Leptin receptor	4,39	chr1
LEPR	3953 /// 54741	leptin receptor /// leptin receptor overlapping transcript	3,49	chr1
LEPRE1	64175	leucine proline-enriched proteoglycan (leprecan) 1	4,05	chr1
LEPREL2	10536	leprecan-like 2	2,51	chr12
LEPROT	54741	leptin receptor overlapping transcript	3,50	chr1
LGALS1	3956	lectin, galactoside-binding, soluble, 1 (galectin 1)	52,69	chr22
LGALS3	3958 /// 81625	lectin, galactoside-binding, soluble, 3 (galectin 3) /// galectin-3 internal gene	10,80	chr14
LGALS3BP	3959	lectin, galactoside-binding, soluble, 3 binding protein	7,85	chr17
LGALS8	3964	lectin, galactoside-binding, soluble, 8 (galectin 8)	5,12	chr1
LGMN	5641	legumain	2,55	chr13
LHCGR	3973	Luteinizing hormone/choriogonadotropin receptor	4,36	chr2
LHFP	10186	lipoma HMGIC fusion partner	8,04	chr13
LHX8	431707	LIM homeobox 8	5,89	chr1
LIF	3976	leukemia inhibitory factor (cholinergic differentiation factor)	8,10	chr22
LIG4	3981	ligase IV, DNA, ATP-dependent	3,28	chr13
LIMS1	3987	LIM and senescent cell antigen-like domains 1	3,84	chr2
LIMS3	96626	LIM and senescent cell antigen-like domains 3	7,42	chr2
LIX1L	128077	Lix1 homolog (mouse) like	22,18	chr1
LMAN1	3998	lectin, mannose-binding, 1	3,18	chr18
LMBRD2	92255	LMBR1 domain containing 2	3,11	chr5
LMCD1	29995	LIM and cysteine-rich domains 1	11,48	chr3
LMNA	4000	lamin A/C	11,58	chr1
LMO7	4008	LIM domain 7	22,68	chr13
LMOD1	25802	leiomodin 1 (smooth muscle)	9,05	chr1
LNPEP	4012	leucyl/cystinyl aminopeptidase	4,33	chr5
LOC126917	126917	hypothetical protein LOC126917	3,01	chr1
LOC133308	133308	hypothetical protein BC009732	2,30	chr4
LOC134147	134147	similar to mouse 2310016A09Rik gene	2,24	chr5
LOC143381	143381	hypothetical protein LOC143381	3,76	chr10
LOC143903	143903	layilin	19,22	chr11
LOC144363	144363	hypothetical protein LOC144363	3,55	chr12
LOC144871	144871	Hypothetical protein LOC144871	3,58	chr13
LOC148898	148898	hypothetical protein BC007899	2,06	chr1
LOC149478	149478	Hypothetical protein LOC149478	2,32	chr1
LOC151194	151194	similar to hepatocellular carcinoma-associated antigen HCA557b	2,09	chr2
LOC153222	153222	adult retina protein	2,11	chr5
LOC162073	162073	Hypothetical protein LOC162073	10,19	chr16
LOC168850	168850	hypothetical protein LOC168850	3,81	chr7
LOC196463	196463	Hypothetical protein LOC196463	2,79	chr12
LOC200030	200030	hypothetical protein LOC200030	2,35	chr1
LOC200030	200030 /// 400781	hypothetical protein LOC200030 /// hypothetical LOC400781	3,71	chr1
LOC201895	201895	hypothetical protein LOC201895	4,58	chr4
LOC203411	203411	hypothetical protein LOC203411	2,87	chrX
LOC203427	203427	similar to solute carrier family 25 , member 16	5,18	chrX
LOC222070	222070	hypothetical protein LOC222070	2,14	chr7
LOC253981	253981	hypothetical protein LOC253981	2,35	chr4
LOC255783	255783	hypothetical protein LOC255783	6,04	chr19
LOC283130	283130	Hypothetical protein LOC283130	2,40	chr11
LOC283219	283219	hypothetical protein LOC283219	4,57	chr11
LOC283464	283464	hypothetical protein LOC283464	3,05	chr12
LOC283480	283480	Hypothetical protein LOC283480	3,34	chr13
LOC283508	283508	hypothetical protein LOC283508	2,61	chr13
LOC283537	283537	hypothetical protein LOC283537	5,46	chr13
LOC283677	283677	hypothetical LOC283677	43,29	chr4
LOC283687	283687	hypothetical protein LOC283687	2,61	chr15
LOC283824	283824	hypothetical protein LOC283824	4,06	chr16
LOC284454	284454	hypothetical protein LOC284454	3,16	chr19
LOC285382	285382	hypothetical gene supported by AK091454	3,00	chr3
LOC285431	285431	hypothetical protein LOC285431	3,94	chr4
LOC285550	285550	hypothetical protein LOC285550	3,21	chr4
LOC285831	285831	hypothetical protein LOC285831	2,40	chr6
LOC286144	286144	Hypothetical protein LOC286144	2,83	chr8
LOC286167	286167	hypothetical protein LOC286167	6,83	chr8
LOC286170	286170	hypothetical protein LOC286170	3,73	chr8
LOC286437	286437	hypothetical protein LOC286437	2,02	chrX
LOC338620	338620	hypothetical protein LOC338620	7,74	chr10

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LOC339005	339005 /// 440253	hypothetical protein LOC339005 /// hypothetical protein LOC440253	2,68	chr15
LOC340061	340061	hypothetical protein LOC340061	9,37	chr5
LOC346887	346887	similar to solute carrier family 16 (monocarboxylic acid transporters), member 1	2,12	chr8
LOC374395	374395	similar to RIKEN cDNA 1810059G22	2,00	chr11
LOC387758	387758	similar to RIKEN cDNA 1110018M03	5,96	chr11
LOC387882	387882	hypothetical protein	12,25	chr12
LOC388114	388114	Hypothetical LOC388114	2,51	chr15
LOC388620	388620	Similar to implantation-associated protein	3,92	chr1
LOC389129	389129	similar to CG9996-PA	10,22	chr3
LOC389432	389432	SAM domain containing 1	3,51	chr6
LOC399959	399959	Hypothetical gene supported by BX647608	74,36	chr11
LOC400843	400843	hypothetical LOC400843	4,40	chr20
LOC401093	401093	hypothetical LOC401093	4,14	chr3
LOC401115	401115	hypothetical gene supported by BC038466; BC062790	2,14	chr4
LOC401212	401212	hypothetical gene supported by BX640700	2,71	chr5
LOC401394	401394 /// 402578	hypothetical LOC401394 /// hypothetical LOC402578	5,06	chr7
LOC402560	402560	Hypothetical LOC401384	9,69	chr7
LOC440460	440460	SH3-domain GRB2-like pseudogene 3	3,94	chr17
LOC440536	440536	hypothetical gene supported by AK098812	3,65	chr19
LOC440885	440885	LOC440885	5,28	chr2
LOC440886	440886	Similar to lymphocyte-specific protein 1	8,46	chr2
LOC440928	440928	hypothetical gene supported by AK096649	4,77	chr2
LOC440995	440995	hypothetical gene supported by BC034933; BC068085	3,35	chr3
LOC441022	441022	similar to RUN and FYVE domain-containing 2; Run- and FYVE-domain contain	2,29	chr4
LOC441212	441212	PNAS-13	2,18	chr7
LOC441428	441428	Hypothetical gene supported by BX641014	2,73	chr9
LOC441461	441461	hypothetical gene supported by BC030123	12,72	chr9
LOC441762	441762	Similar to CG7467-PA /// Similar to CG7467-PA	2,16	chr16
LOC492311	492311	similar to bovine IgA regulatory protein	2,31	chr5
LOC493869	493869	similar to RIKEN cDNA 2310016C16	3,01	chr5
LOC51315	51315	hypothetical protein LOC51315	3,50	chr2
LOC51334	51334	mesenchymal stem cell protein DSC54	14,29	chr5
LOC554202	554202	hypothetical LOC554202	2,23	chr9
LOC90693	90693	LOC90693 protein	3,01	chr7
LOC91137	91137	Hypothetical protein BC017169	9,30	chr5
LOC92689	92689	hypothetical protein BC001096	39,06	chr4
LOC93349	93349	hypothetical protein BC004921	9,80	chr2
LOC96610	96610	Hypothetical protein similar to KIAA0187 gene product	3,16	chr9
LONPL	83752	Peroxisomal LON protease like	5,70	chr16
LOX	4015	lysyl oxidase	388,97	chr5
LOXL1	4016	lysyl oxidase-like 1	24,19	chr15
LOXL2	4017	lysyl oxidase-like 2	51,18	chr8
LOXL4	84171	lysyl oxidase-like 4	2,54	chr10
LPGAT1	9926	Lysophosphatidylglycerol acyltransferase 1	3,99	chr1
LPIN1	23175	lipin 1	4,92	chr2
LPIN2	9663	lipin 2	2,21	chr18
LPP	4026	LIM domain containing preferred translocation partner in lipoma	4,68	chr3
LRAP	64167	Leukocyte-derived arginine aminopeptidase	4,38	chr5
LRIG3	121227	leucine-rich repeats and immunoglobulin-like domains 3	3,72	chr12
LRP1	4035	low density lipoprotein-related protein 1 (alpha-2-macroglobulin receptor)	4,26	chr12
LRP10	26020	low density lipoprotein receptor-related protein 10	15,41	chr14
LRP11	84918	low density lipoprotein receptor-related protein 11	3,70	chr6
LRP12	29967	low density lipoprotein-related protein 12	7,16	chr8
LRPAP1	4043	Low density lipoprotein receptor-related protein associated protein 1	3,03	chr4
LRRC15	131578	leucine rich repeat containing 15	2,69	chr3
LRRC17	10234	leucine rich repeat containing 17	40,11	chr7
LRRC35	219899	Leucine rich repeat containing 35	2,02	chr11
LRRC41	10489	leucine rich repeat containing 41	2,31	chr6
LRRC8C	84230	leucine rich repeat containing 8 family, member C	3,01	chr1
LRRFIP1	9208	leucine rich repeat (in FLII) interacting protein 1	2,48	chr2
LTB4DH	22949	leukotriene B4 12-hydroxydehydrogenase	2,20	chr9
LTBP1	4052	latent transforming growth factor beta binding protein 1	8,13	chr2
LTBP2	4053	latent transforming growth factor beta binding protein 2	13,08	chr14
LTBP3	4054	latent transforming growth factor beta binding protein 3	9,77	chr11
LXN	56925	latexin	4,64	chr3
LY96	23643	lymphocyte antigen 96	3,86	chr8

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LYPD1	116372	LY6/PLAUR domain containing 1	7,27	chr2
LYPLA3	23659	lysophospholipase 3 (lysosomal phospholipase A2)	2,15	chr16
LYSMD3	116068	LysM, putative peptidoglycan-binding, domain containing 3	2,57	chr5
LYST	1130	lysosomal trafficking regulator	6,29	chr1
LZTFL1	54585	leucine zipper transcription factor-like 1	2,62	chr3
LZTR2	89866	leucine zipper transcription regulator 2	3,05	chr1
LZTS1	11178	leucine zipper, putative tumor suppressor 1	3,77	chr8
M6PRBP1	10226	mannose-6-phosphate receptor binding protein 1	3,61	chr19
MAB21L2	10586	mab-21-like 2 (C. elegans)	45,95	chr4
MAFF	23764	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)	13,02	chr22
MAGED1	9500	melanoma antigen family D, 1	2,62	chrX
MAGED2	10916	melanoma antigen family D, 2	2,62	chrX
MAGEH1	28986	melanoma antigen family H, 1	2,30	chrX
MALAT1	378938	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)	3,37	chr11
MAML2	84441	Mastermind-like 2 (Drosophila)	6,19	chr11
MAN1A1	4121	Mannosidase, alpha, class 1A, member 1	4,54	chr6
MAN1A2	10905	Mannosidase, alpha, class 1A, member 2	2,77	chr1
MAN1B1	11253	mannosidase, alpha, class 1B, member 1	2,03	chr9
MAN2B2	23324	mannosidase, alpha, class 2B, member 2	12,03	chr4
MANEA	79694	mannosidase, endo-alpha	2,28	chr6
MAP1A	4130	microtubule-associated protein 1A	16,47	chr15
MAP1B	4131	microtubule-associated protein 1B	6,41	chr5
MAP1LC3B	81631	microtubule-associated protein 1 light chain 3 beta	4,53	chr12
MAP3K5	4217	mitogen-activated protein kinase kinase kinase 5	2,25	chr6
MAP4	4134	microtubule-associated protein 4	5,40	chr3
MAP4K5	11183	mitogen-activated protein kinase kinase kinase kinase 5	3,18	chr14
MAPK1	5594	mitogen-activated protein kinase 1	2,26	chr22
MAPKAP1	79109	mitogen-activated protein kinase associated protein 1	2,72	chr9
MAPKBP1	23005	mitogen activated protein kinase binding protein 1	2,06	chr15
MARCH4	57574	membrane-associated ring finger (C3HC4) 4	2,94	chr2
MARCKS	4082	Myristoylated alanine-rich protein kinase C substrate	3,23	chr6
MARVELD1	83742	MARVEL domain containing 1	3,21	chr10
MAST4	23227	microtubule associated serine/threonine kinase family member 4	3,48	chr5
MAT2A	4144	Methionine adenosyltransferase II, alpha	2,05	chr2
MAWBP	64081	MAWD binding protein	2,62	chr10
MAX	4149	MYC associated factor X	2,35	chr14
MBD2	8932	methyl-CpG binding domain protein 2	30,82	chr18
MBD5	55777	methyl-CpG binding domain protein 5	3,24	chr2
MBNL1	4154	muscleblind-like (Drosophila)	22,48	chr3
MBNL2	10150	Muscleblind-like 2 (Drosophila)	32,00	chr13
MBTPS1	8720	membrane-bound transcription factor peptidase, site 1	2,51	chr16
MCAM	4162	melanoma cell adhesion molecule	5,47	chr11
MCFD2	90411	multiple coagulation factor deficiency 2	2,98	chr2
MDFIC	29969	MyoD family inhibitor domain containing /// MyoD family inhibitor domain contain	5,53	chr7
MDM2	4193	Mdm2, transformed 3T3 cell double minute 2, p53 binding protein (mouse)	2,82	chr12
ME1	4199	Malic enzyme 1, NADP(+)-dependent, cytosolic	12,94	chr6
MED28	80306	mediator of RNA polymerase II transcription, subunit 28 homolog (yeast)	2,03	chr1
MED8	112950	mediator of RNA polymerase II transcription, subunit 8 homolog (yeast)	3,65	chr1
MEF2A	4205	MADS box transcription enhancer factor 2, polypeptide A (myocyte enhancer fa	2,45	chr15
MEF2C	4208	MADS box transcription enhancer factor 2, polypeptide C (myocyte enhancer fa	5,07	chr5
MEF2D	4209	MADS box transcription enhancer factor 2, polypeptide D (myocyte enhancer fa	2,11	chr1
MEIS2	4212	Meis1, myeloid ecotropic viral integration site 1 homolog 2 (mouse)	21,69	chr15
MET	4233	met proto-oncogene (hepatocyte growth factor receptor)	6,83	chr7
MFAP5	8076	microfibrillar associated protein 5	13,66	chr12
MFI2	4241	antigen p97 (melanoma associated) identified by monoclonal antibodies 133.2	3,08	chr3
MFSD1	64747	major facilitator superfamily domain containing 1	5,41	chr3
MGAT1	4245	mannosyl (alpha-1,3-)-glycoprotein beta-1,2-N-acetylglucosaminyltransferase	2,68	chr5
MGAT2	4247	mannosyl (alpha-1,6-)-glycoprotein beta-1,2-N-acetylglucosaminyltransferase	3,34	chr14
MGC10850	84736	hypothetical protein MGC10850	4,33	chr11
MGC10854	84260	trichoplein	3,24	chr12
MGC11324	84803	hypothetical protein MGC11324 /// hypothetical protein MGC11324	2,89	chr4
MGC14376	84981	hypothetical protein MGC14376	14,20	chr17
MGC15429	84836	hypothetical protein MGC15429	2,72	chr3
MGC15476	147906	thymus expressed gene 3-like	2,75	chr19
MGC15523	124565	hypothetical protein MGC15523	3,26	chr17
MGC16121	84848	Hypothetical protein MGC16121	2,74	chrX

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MGC17330	113791	HGFL gene /// HGFL gene	3,20	chr22
MGC17337	91283	similar to RIKEN cDNA 5730528L13 gene	2,30	chr9
MGC17943	90488	hypothetical protein MGC17943	15,82	chr12
MGC19764	162394	likely ortholog of mouse schlafen 5	11,78	chr17
MGC20235	113277	hypothetical protein MGC20235	3,86	chr17
MGC23985	389336	similar to AVLV472	8,56	chr5
MGC24039	160518	hypothetical protein MGC24039	2,79	chr12
MGC26963	166929	hypothetical protein MGC26963	49,90	chr4
MGC2752	65996	hypothetical protein MGC2752	2,23	chr19
MGC3123	79089	hypothetical protein MGC3123	2,23	chr17
MGC34646	157807	Hypothetical protein MGC34646	10,17	chr8
MGC34830	120196	hypothetical protein MGC34830	4,48	chr11
MGC39900	286527	hypothetical protein MGC39900	2,10	chrX
MGC4677	112597	hypothetical protein MGC4677	34,47	chr2
MGC5370	84825	hypothetical protein MGC5370	3,31	chr12
MGC5508	79073	hypothetical protein MGC5508	2,29	chr11
MGC5618	79099	hypothetical protein MGC5618	2,25	chr6
MGLL	11343	monoglyceride lipase /// monoglyceride lipase	10,84	chr3
MICA	4276	MHC class I polypeptide-related sequence A	7,74	chr6
MICAL2	9645	microtubule associated monoxygenase, calponin and LIM domain containing 2	127,34	chr11
MINA	84864	MYC induced nuclear antigen	2,01	chr3
MIRN21	406991	microRNA 21	7,85	chr9
MITF	4286	microphthalmia-associated transcription factor	4,29	chr3
MKRN2	23609	makorin, ring finger protein, 2	2,93	chr3
MLLT11	10962	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); tra	2,34	chr1
MLLT6	4302	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); tra	2,44	chr17
MLPH	79083	melanophilin	8,12	chr2
MLR2	84458	ligand-dependent corepressor	2,52	chr10
MLXIP	22877	MLX interacting protein	2,75	chr12
MME	4311	membrane metallo-endopeptidase (neutral endopeptidase, enkephalinase, CA	7,11	chr3
MMP1	4312	matrix metallopeptidase 1 (interstitial collagenase)	114,26	chr11
MMP14	4323	matrix metallopeptidase 14 (membrane-inserted)	2,53	chr14
MMP16	4325	matrix metallopeptidase 16 (membrane-inserted)	3,45	chr8
MMP19	4327	matrix metallopeptidase 19	2,74	chr12
MMP2	4313	matrix metallopeptidase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV colla	20,82	chr16
MN1	4330	meningioma (disrupted in balanced translocation) 1	4,01	chr22
MOBKL2A	126308	MOB1, Mps One Binder kinase activator-like 2A (yeast)	6,42	chr19
MOCS2	4338	molybdenum cofactor synthesis 2	2,85	chr5
MONDOA	22877	MondoA	2,18	chr12
MORC4	79710	MORC family CW-type zinc finger 4	12,70	chrX
MOSPD1	56180	motile sperm domain containing 1	2,48	chrX
MOSPD2	158747	motile sperm domain containing 2	2,23	chrX
MOXD1	26002	monooxygenase, DBH-like 1	6,96	chr6
MPPE1	65258	metallophosphoesterase 1	2,48	chr18
MPZL1	9019	myelin protein zero-like 1	3,30	chr1
MRAS	22808	muscle RAS oncogene homolog	5,80	chr3
MRC2	9902	mannose receptor, C type 2	8,50	chr17
MRCL3	10627	myosin regulatory light chain MRCL3	2,21	chr18
MRCL3	103910 /// 10627	myosin regulatory light chain MRCL3 /// myosin regulatory light chain MRLC2	2,50	chr18
MRLC2	103910	myosin regulatory light chain MRLC2	2,26	chr18
MRPL2	51069	mitochondrial ribosomal protein L2	2,94	chr6
MRPS22	56945	Mitochondrial ribosomal protein S22	3,62	chr3
MRVI1	10335	Murine retrovirus integration site 1 homolog	3,75	chr11
MSN	4478	moesin	4,80	chr5
MSRB3	253827	methionine sulfoxide reductase B3	138,84	chr12
MSX1	4487	msh homeo box homolog 1 (Drosophila)	9,21	chr4
MSX2	4488	msh homeo box homolog 2 (Drosophila)	3,44	chr5
MT2A	4502	metallothionein 2A	3,32	chr16
MTCBP-1	55256	membrane-type 1 matrix metalloproteinase cytoplasmic tail binding protein-1	2,21	chr2
MTCH2	23788	mitochondrial carrier homolog 2 (C. elegans)	4,26	chr11
MTDH	92140	Metadherin	4,46	chr8
MTMR6	9107	myotubularin related protein 6	4,36	chr13
MVP	9961	major vault protein	18,90	chr16
MXD1	4084	MAX dimerization protein 1	5,94	chr2
MXD4	10608	MAX dimerization protein 4	2,28	chr4
MXI1	4601	MAX interactor 1 /// MAX interactor 1	2,00	chr10

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MXRA5	25878	matrix-remodelling associated 5	15,40	chrX
MXRA7	439921	matrix-remodelling associated 7	9,58	chr17
MXRA8	54587	matrix-remodelling associated 8	9,81	chr1_random
MYADM	91663	myeloid-associated differentiation marker	3,81	chr19
MYBL1	4603	v-myb myeloblastosis viral oncogene homolog (avian)-like 1	7,15	chr8
MYH9	4627	myosin, heavy polypeptide 9, non-muscle	6,41	chr22
MYL9	10398	myosin, light polypeptide 9, regulatory	21,07	chr20
MYLK	4638	myosin, light polypeptide kinase	19,76	chr3
MYO1C	4641	myosin IC	4,16	chr17
MYO5A	4644	myosin VA (heavy polypeptide 12, myoxin)	2,29	chr15
MYOCD	93649	myocardin	25,49	chr17
NAGK	55577	N-acetylglucosamine kinase /// N-acetylglucosamine kinase	2,55	chr2
NALP1	22861	NACHT, leucine rich repeat and PYD (pyrin domain) containing 1	7,16	chr17
NAP5	344148	Nck-associated protein 5	4,32	chr2
NAPA	8775	N-ethylmaleimide-sensitive factor attachment protein, alpha	3,08	chr19
NAV1	89796	neuron navigator 1	7,97	chr1
NAV3	89795	neuron navigator 3	13,42	chr12
NBEA	26960	neurobeachin	4,14	chr13
NBL1	4681	neuroblastoma, suppression of tumorigenicity 1	3,22	chr1
NBPF8	641559	Neuroblastoma breakpoint family, member 20	6,97	chr1
NBR1	4077	neighbor of BRCA1 gene 1	2,15	chr17
NCBP2	22916	Nuclear cap binding protein subunit 2, 20kDa	2,14	chr3
NCOA3	8202	nuclear receptor coactivator 3	2,43	chr20
NCOA7	135112	nuclear receptor coactivator 7	7,07	chr6
NCSTN	23385	nicastrin	2,37	chr1
NDEL1	81565	nudE nuclear distribution gene E homolog like 1 (A. nidulans) /// nudE nuclear d	3,19	chr17
NDFIP1	80762	Nedd4 family interacting protein 1	3,72	chr5
NDFIP2	54602	Nedd4 family interacting protein 2	4,80	chr13
NDP52	10241	nuclear domain 10 protein	2,54	chr17
NDRG1	10397	N-myc downstream regulated gene 1	7,39	chr8
NDUFS1	4719	NADH dehydrogenase (ubiquinone) Fe-S protein 1, 75kDa (NADH-coenzyme Q	2,29	chr2
NECAP2	55707	NECAP endocytosis associated 2	2,18	chr1
NEDD4	4734	neural precursor cell expressed, developmentally down-regulated 4	15,69	chr15
NEDD9	4739	neural precursor cell expressed, developmentally down-regulated 9	9,65	chr6
NEGR1	257194	neuronal growth regulator 1	7,89	chr1
NEK6	10783	NIMA (never in mitosis gene a)-related kinase 6	6,67	chr9
NEK7	140609	NIMA (never in mitosis gene a)-related kinase 7	19,50	chr1
NEXN	91624	nexilin (F actin binding protein)	56,40	chr1
NF1	4763	Neurofibromin 1 (neurofibromatosis, von Recklinghausen disease, Watson dise	2,22	chr17
NF2	4771	neurofibromin 2 (bilateral acoustic neuroma)	3,06	chr22
NFAT5	10725	nuclear factor of activated T-cells 5, tonicity-responsive	8,73	chr16
NFATC4	4776	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4	2,27	chr14
NFE2L2	4780	nuclear factor (erythroid-derived 2)-like 2	3,06	chr2
NFIC	4782	nuclear factor I/C (CCAAT-binding transcription factor)	4,04	chr19
NFKB1	4790	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (p105)	4,13	chr4
NFKBIZ	64332	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, zeta	5,86	chr3
NGFB	4803	nerve growth factor, beta polypeptide	2,34	chr1
NID1	4811	nidogen 1	6,56	chr1
NID2	22795	nidogen 2 (osteonidogen)	16,49	chr14
NIN	51199	ninein (GSK3B interacting protein)	5,22	chr14
NIPSNAP3A	25934	nipsnap homolog 3A (C. elegans) /// nipsnap homolog 3A (C. elegans)	5,15	chr9
NKIRAS1	28512	NFKB inhibitor interacting Ras-like 1	2,40	chr3
NKIRAS2	28511	NFKB inhibitor interacting Ras-like 2	2,35	chr17
NKX3-1	4824	NK3 transcription factor related, locus 1 (Drosophila)	2,35	chr8
NMT2	9397	N-myristoyltransferase 2	5,09	chr10
NNMT	4837	nicotinamide N-methyltransferase	261,83	chr11
NNT	23530	nicotinamide nucleotide transhydrogenase	3,92	chr5
NOD27	84166	nucleotide-binding oligomerization domains 27	2,94	chr16
NOL3	8996	nucleolar protein 3 (apoptosis repressor with CARD domain)	2,25	chr16
NOTCH2	4853	Notch homolog 2 (Drosophila)	3,29	chr1
NOTCH2NL	388677	Notch homolog 2 (Drosophila) N-terminal like	4,37	chr1
NOX4	50507	NADPH oxidase 4	10,24	chr11
NPAL3	57185	NIPA-like domain containing 3	9,52	chr1
NPAS2	4862	neuronal PAS domain protein 2	3,09	chr2
NPHP3	27031	nephronophthisis 3 (adolescent)	4,45	chr3
NPR3	4883	natriuretic peptide receptor C/guanylate cyclase C (atrionatriuretic peptide recep	4,56	chr5

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NQO1	1728	NAD(P)H dehydrogenase, quinone 1	6,69	chr16
NR2F2	7026	nuclear receptor subfamily 2, group F, member 2	49,89	chr15
NR3C1	2908	nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor) /// nu	7,55	chr5
NRBP2	340371	nuclear receptor binding protein 2	3,83	chr8
NRIP1	8204	nuclear receptor interacting protein 1	4,48	chr21
NRIP3	56675	nuclear receptor interacting protein 3	3,46	chr11
NRP1	8829	neuropilin 1	37,96	chr10
NRP2	8828	Neuropilin 2	12,17	chr2
NRXN3	9369	neurexin 3	3,03	chr14
NS3TP2	65983	HCV NS3-transactivated protein 2	2,89	chr5
NS5ATP13TP2	220323	NS5ATP13TP2 protein	5,13	chr11
NSF	4905	N-ethylmaleimide-sensitive factor	2,57	chr17
NT5E	4907	5'-nucleotidase, ecto (CD73)	83,19	chr6
NTF3	4908	neurotrophin 3	2,15	chr12
NTN4	59277	netrin 4	68,83	chr12
NUAK1	9891	NUAK family, SNF1-like kinase, 1	4,24	chr12
NUCB1	4924	nucleobindin 1	2,67	chr19
NUCB2	4925	nucleobindin 2	4,76	chr11
NUDT4	11163	Nudix (nucleoside diphosphate linked moiety X)-type motif 4 pseudogene 2	4,85	chr5
NUMB	8650	numb homolog (Drosophila)	2,52	chr14
OACT2	129642	O-acyltransferase (membrane bound) domain containing 2	2,58	chr2
OCRL	4952	oculocerebrorenal syndrome of Lowe	2,34	chrX
ODZ2	57451	odz, odd Oz/ten-m homolog 2 (Drosophila)	8,53	chr5
OGFRL1	79627	opioid growth factor receptor-like 1	2,63	chr6
OIP106	22906	OGT(O-Glc-NAc transferase)-interacting protein 106 KDa	2,47	chr3
OLFML2A	169611	olfactomedin-like 2A	3,57	chr9
OPN1SW	611	Opsin 1 (cone pigments), short-wave-sensitive (color blindness, tritan)	4,37	chr7
OPN3	23596	opsin 3 (encephalopsin, panopsin)	7,42	chr1
OPTN	10133	optineurin	12,82	chr10
ORMDL1	94101	ORM1-like 1 (S. cerevisiae)	2,79	chr2
OS9	10956	amplified in osteosarcoma	4,49	chr12
OSAP	84709	ovary-specific acidic protein	11,35	chr4
OSBPL5	114879	oxysterol binding protein-like 5	3,43	chr11
OSMR	9180	Oncostatin M receptor	49,48	chr5
OSTF1	26578	osteoclast stimulating factor 1	2,21	chr9
OXR1	55074	oxidation resistance 1	3,94	chr8
OXTR	5021	oxytocin receptor	94,66	chr3
P4HA1	5033	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alph	5,06	chr10
P4HA2	8974	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alph	21,34	chr5
P4HA3	283208	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alph	3,18	chr11
P4HB	5034	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), beta	3,93	chr17
PACS1	55690	phosphofurin acidic cluster sorting protein 1	2,20	chr11
PAEP	5047	progestagen-associated endometrial protein (placental protein 14, pregnancy-a	3,72	chr19
PAFAH1B1	5048	platelet-activating factor acetylhydrolase, isoform Ib, alpha subunit 45kDa	2,20	chr17
PAG1	55824	phosphoprotein associated with glycosphingolipid microdomains 1	6,23	chr8
PAK2	5062	p21 (CDKN1A)-activated kinase 2	2,34	chr3
PALM2	114299	paralemmin 2	2,50	chr9
PALM2-AKAP2	445815	PALM2-AKAP2 protein	2,95	chr9
PAM	5066	peptidylglycine alpha-amidating monooxygenase	4,53	chr5
PANX1	24145	Pannexin 1	2,46	chr11
PAPPA	5069	pregnancy-associated plasma protein A, pappalysin 1	172,39	chr9
PAPSS2	9060	3'-phosphoadenosine 5'-phosphosulfate synthase 2	6,50	chr10
PARVA	55742	parvin, alpha	24,65	chr11
PBXIP1	57326	pre-B-cell leukemia transcription factor interacting protein 1	2,67	chr1
PCAF	8850	p300/CBP-associated factor	3,33	chr3
PCDH9	5101	protocadherin 9	7,10	chr13
PCDHB10	56126	protocadherin beta 10	4,26	chr5
PCDHGC3	/ 56105 /// 56106	protocadherin gamma subfamily C, 3 /// protocadherin gamma subfamily C, 3 //	3,34	chr5
PCGF1	84759	polycomb group ring finger 1	2,08	chr2
PCGF4	648	polycomb group ring finger 4	3,20	chr10
PCGF5	84333	polycomb group ring finger 5	19,14	chr10
PCOLCE	5118	procollagen C-endopeptidase enhancer	7,16	chr7
PCSK7	9159	Proprotein convertase subtilisin/kexin type 7	10,70	chr11
PCTK2	5128	PCTAIRE protein kinase 2	3,01	chr12
PCYOX1	51449	prenylcysteine oxidase 1	2,05	chr2
PCYT1A	5130	Phosphate cytidylyltransferase 1, choline, alpha	3,18	chr3

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PDCD4	27250	programmed cell death 4 (neoplastic transformation inhibitor)	3,33	chr10
PDCD6	10016 /// 57491	programmed cell death 6 /// aryl-hydrocarbon receptor repressor	8,20	chr5
PDE1C	5137	phosphodiesterase 1C, calmodulin-dependent 70kDa	3,29	chr7
PDE4B	5142	phosphodiesterase 4B, cAMP-specific (phosphodiesterase E4 dunce homolog,	2,67	chr1
PDE4DIP	9659	phosphodiesterase 4D interacting protein (myomegalin)	5,79	chr1
PDE5A	8654	phosphodiesterase 5A, cGMP-specific	2,11	chr4
PDE7B	27115	phosphodiesterase 7B	2,68	chr6
PDE8A	5151	phosphodiesterase 8A	5,18	chr15
PDGFC	56034	platelet derived growth factor C	24,38	chr4
PDGFRB	5159	platelet-derived growth factor receptor, beta polypeptide	10,51	chr5
PDGFRL	5157	platelet-derived growth factor receptor-like	5,77	chr8
PDK2	5164	pyruvate dehydrogenase kinase, isoenzyme 2	2,17	chr17
PDLIM2	64236	PDZ and LIM domain 2 (mystique)	2,68	chr8
PDLIM3	27295	PDZ and LIM domain 3	6,40	chr4
PDLIM4	8572	PDZ and LIM domain 4	5,04	chr5
PDLIM5	10611	PDZ and LIM domain 5	7,12	chr4
PDLIM7	9260	PDZ and LIM domain 7 (enigma)	7,69	chr5
PDZRN3	23024	PDZ domain containing RING finger 3	3,20	chr3
PEA15	8682	phosphoprotein enriched in astrocytes 15	8,19	chr1
PEAR1	375033	platelet endothelial aggregation receptor 1	9,29	chr1
PEX10	5192	Peroxisome biogenesis factor 10	3,21	chr1
PEX11B	8799	peroxisomal biogenesis factor 11B	2,81	chr1
PEX13	5194	peroxisome biogenesis factor 13	2,27	chr2
PGCP	10404	plasma glutamate carboxypeptidase	5,60	chr8
PGM3	5238	phosphoglucomutase 3	3,07	chr6
PGRMC2	10424	progesterone receptor membrane component 2	2,08	chr4
PHC2	1912	polyhomeotic-like 2 (Drosophila)	8,80	chr1
PHC3	80012	polyhomeotic like 3 (Drosophila)	2,09	chr3
PHF20L1	51105	PHD finger protein 20-like 1	4,35	chr8
PHLDA1	22822	Pleckstrin homology-like domain, family A, member 1	3,23	chr12
PHLDA2	7262	pleckstrin homology-like domain, family A, member 2	15,10	chr11
PHLDA3	23612	pleckstrin homology-like domain, family A, member 3	4,83	chr1
PHLDB2	90102	pleckstrin homology-like domain, family B, member 2	14,96	chr3
PHTF2	57157	putative homeodomain transcription factor 2	2,69	chr7
PICALM	8301	phosphatidylinositol binding clathrin assembly protein	4,52	chr11
PIGX	54965	phosphatidylinositol glycan, class X	2,28	chr3
PIK3C3	5289	Phosphoinositide-3-kinase, class 3	3,10	chr18
PIK4CB	5298	phosphatidylinositol 4-kinase, catalytic, beta polypeptide	3,53	chr1
PINK1	65018	PTEN induced putative kinase 1	2,72	chr1
PIP5K1C	23396	phosphatidylinositol-4-phosphate 5-kinase, type I, gamma	2,21	chr19
PITPNA	5306	phosphatidylinositol transfer protein, alpha	2,42	chr17
PITRM1	10531	pitrilysin metallopeptidase 1	2,67	chr10
PJA2	9867	praja 2, RING-H2 motif containing	3,02	chr5
PKIB	5570	protein kinase (cAMP-dependent, catalytic) inhibitor beta	2,33	chr6
PKIG	11142	protein kinase (cAMP-dependent, catalytic) inhibitor gamma	2,08	chr20
PLA2G4A	5321	phospholipase A2, group IVA (cytosolic, calcium-dependent)	3,38	chr1
PLAGL1	5325	pleiomorphic adenoma gene-like 1	17,03	chr6
PLAT	5327	plasminogen activator, tissue	23,22	chr8
PLAU	5328	plasminogen activator, urokinase	16,09	chr10
PLAUR	5329	plasminogen activator, urokinase receptor	18,67	chr19
PLCB1	23236	phospholipase C, beta 1 (phosphoinositide-specific)	2,42	chr20
PLD1	5337	phospholipase D1, phophatidylcholine-specific	4,36	chr3
PLD3	23646	phospholipase D family, member 3	3,91	chr19
PLDN	26258	pallidin homolog (mouse)	2,39	chr15
PLEC1	5339	plectin 1, intermediate filament binding protein 500kDa	2,66	chr8
PLEKHA2	59339	pleckstrin homology domain containing, family A (phosphoinositide binding spe	18,71	chr8
PLEKHA3	65977	pleckstrin homology domain containing, family A (phosphoinositide binding spe	2,58	chr2
PLEKHC1	10979	pleckstrin homology domain containing, family C (with FERM domain) member	2,27	chr14
PLK1	5347	Polo-like kinase 1 (Drosophila)	2,32	chr16
PLK2	10769	polo-like kinase 2 (Drosophila)	18,51	chr5
PLK3	1263	polo-like kinase 3 (Drosophila)	2,02	chr1
PLOD1	5351	procollagen-lysine 1, 2-oxoglutarate 5-dioxygenase 1	9,76	chr1
PLOD2	5352	procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2	10,14	chr3
PLOD3	8985	procollagen-lysine, 2-oxoglutarate 5-dioxygenase 3	3,27	chr7
PLP2	5355	proteolipid protein 2 (colonic epithelium-enriched)	20,06	chrX
PLSCR3	254863 /// 57048	phospholipid scramblase 3 /// hypothetical protein MGC40107	3,10	chr17

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PLSCR4	57088	phospholipid scramblase 4	2,86	chr3
PLXNA2	5362	plexin A2	2,19	chr1
PLXNA3	55558	plexin A3	2,83	chrX
PLXNB2	23654	plexin B2	3,30	chr22
PLXND1	23129	plexin D1	3,22	chr3
PME-1	51400	protein phosphatase methylesterase-1	3,23	chr11
PMM1	5372	phosphomannomutase 1	3,75	chr22
PMP22	5376	peripheral myelin protein 22	8,35	chr17
POFUT2	23275	protein O-fucosyltransferase 2	3,22	chr21
POLH	5429	Polymerase (DNA directed), eta	3,42	chr6
POLK	51426	polymerase (DNA directed) kappa	3,54	chr5
POLR3GL	84265	polymerase (RNA) III (DNA directed) polypeptide G (32kD) like	6,75	chr1
PON2	5445	Paraoxonase 2	2,47	chr7
POPDC3	64208	popeye domain containing 3	4,44	chr6
PORIMIN	114908	pro-oncosis receptor inducing membrane injury gene	2,81	chr11
POSTN	10631	periostin, osteoblast specific factor	132,94	chr13
PPAPDC1A	196051	phosphatidic acid phosphatase type 2 domain containing 1A	14,97	chr10
PPARA	5465	peroxisome proliferative activated receptor, alpha	2,14	chr22
PPARD	5467	peroxisome proliferative activated receptor, delta	2,94	chr6
PPARG	5468	Peroxisome proliferative activated receptor, gamma	2,00	chr3
PPFIBP1	8496	PTPRF interacting protein, binding protein 1 (liprin beta 1)	5,22	chr12
PPGB	5476	protective protein for beta-galactosidase (galactosialidosis)	2,61	chr20
PPIC	5480	peptidylprolyl isomerase C (cyclophilin C)	4,59	chr5
PPM1F	9647	protein phosphatase 1F (PP2C domain containing)	2,59	chr22
PPM1K	152926	protein phosphatase 1K (PP2C domain containing)	2,38	chr4
PPP1R12A	4659	protein phosphatase 1, regulatory (inhibitor) subunit 12A	2,00	chr12
PPP1R12B	4660	protein phosphatase 1, regulatory (inhibitor) subunit 12B	2,04	chr1
PPP1R15A	23645	protein phosphatase 1, regulatory (inhibitor) subunit 15A	3,29	chr19
PPP1R2	5504	protein phosphatase 1, regulatory (inhibitor) subunit 2	2,07	chr5
PPP1R3C	5507	protein phosphatase 1, regulatory (inhibitor) subunit 3C	6,33	chr10
PPP3CB	5532	protein phosphatase 3 (formerly 2B), catalytic subunit, beta isoform (calcineurin	2,37	chr10
PPP3CC	5533	protein phosphatase 3 (formerly 2B), catalytic subunit, gamma isoform (calcine	6,33	chr8
PRAF2	11230	PRA1 domain family, member 2	5,78	chrX
PRB1	440083 /// 5542	proline-rich protein BstNI subfamily 1 /// proline-rich protein BstNI subfamily 2	2,66	chr12
PRDM16	63976	PR domain containing 16	2,61	chr1
PRDM2	7799	PR domain containing 2, with ZNF domain	2,02	chr1
PRG1	5552	proteoglycan 1, secretory granule	268,53	chr10
PRICKLE2	166336	prickle-like 2 (Drosophila)	5,66	chr3
PRKAA1	5562	protein kinase, AMP-activated, alpha 1 catalytic subunit	3,78	chr5
PRKACB	5567	protein kinase, cAMP-dependent, catalytic, beta	2,71	chr1
PRKAG1	5571	protein kinase, AMP-activated, gamma 1 non-catalytic subunit	2,55	chr12
PRKAG2	51422	protein kinase, AMP-activated, gamma 2 non-catalytic subunit	6,38	chr7
PRKAR1A	5573	protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific exting	2,27	chr17
PRKCDBP	112464	protein kinase C, delta binding protein	5,23	chr11
PRKCE	5581	protein kinase C, epsilon	4,13	chr2
PRKCSH	5589	protein kinase C substrate 80K-H	2,24	chr19
PRNP	5621	prion protein (p27-30) (Creutzfeld-Jakob disease, Gerstmann-Strausler-Scheinl	8,86	chr20
PRO1073	29005	PRO1073 protein	3,57	chr11
PRO1855	55379	hypothetical protein PRO1855	2,19	chr17
PRRG1	5638	proline rich Gla (G-carboxyglutamic acid) 1	3,54	chrX
PRRX1	5396	paired related homeobox 1	119,70	chr1
PRSS12	8492	Protease, serine, 12 (neurotrypsin, motopsin)	8,46	chr4
PRSS23	11098	protease, serine, 23	114,10	chr11
PSCD3	9265	pleckstrin homology, Sec7 and coiled-coil domains 3	2,71	chr7
PSD3	23362	pleckstrin and Sec7 domain containing 3	2,42	chr8
PSMB2	5690	proteasome (prosome, macropain) subunit, beta type, 2	2,58	chr1
PSMB7	5695	Proteasome (prosome, macropain) subunit, beta type, 7	3,97	chr9
PSTPIP2	9050	proline-serine-threonine phosphatase interacting protein 2	3,08	chr18
PTEN	5728	Phosphatase and tensin homolog (mutated in multiple advanced cancers 1)	2,70	chr10
PTGER2	5732	prostaglandin E receptor 2 (subtype EP2), 53kDa	2,68	chr14
PTGER4	5734	prostaglandin E receptor 4 (subtype EP4)	4,84	chr5
PTGFR	5737	prostaglandin F receptor (FP)	2,67	chr1
PTGFRN	5738	prostaglandin F2 receptor negative regulator	3,47	chr1
PTGS2	5743	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclo	8,89	chr1
PTHLH	5744	parathyroid hormone-like hormone /// parathyroid hormone-like hormone	8,74	chr12
PTK9	5756	PTK9 protein tyrosine kinase 9	4,53	chr12

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PTP4A1	7803	protein tyrosine phosphatase type IVA, member 1	3,48	chr6
PTP4A2	8073	protein tyrosine phosphatase type IVA, member 2	2,64	chr1
PTPLA	9200	protein tyrosine phosphatase-like (proline instead of catalytic arginine), membe	2,53	chr10
PTPN11	5781	protein tyrosine phosphatase, non-receptor type 11 (Noonan syndrome 1)	3,00	chr12
PTPN21	11099	Protein tyrosine phosphatase, non-receptor type 21	4,13	chr14
PTPN9	5780	protein tyrosine phosphatase, non-receptor type 9	2,21	chr15
PTPNS1	140885	protein tyrosine phosphatase, non-receptor type substrate 1	2,90	chr20
PTPRJ	5795	Protein tyrosine phosphatase, receptor type, J	2,78	chr11
PTPRM	5797	protein tyrosine phosphatase, receptor type, M	14,22	chr7
PTRF	284119	polymerase I and transcript release factor	22,23	chr17
PTX1	51290	PTX1 protein	2,21	chr12
PTX3	5806	pentraxin-related gene, rapidly induced by IL-1 beta	116,99	chr3
PURB	5814	purine-rich element binding protein B	2,34	chr7
PVR	5817	poliovirus receptor	3,52	chr19
PXDN	7837	peroxidasin homolog (Drosophila)	3,26	chr2
PXK	54899	PX domain containing serine/threonine kinase	5,67	chr3
PXN	5829	paxillin	2,21	chr12
PYCR1	5831	pyrroline-5-carboxylate reductase 1	2,10	chr17
PYGB	5834	phosphorylase, glycogen; brain	3,06	chr20
QIL1	125988	QIL1 protein	2,87	chr19
QKI	9444	quaking homolog, KH domain RNA binding (mouse)	2,04	chr6
QSCN6	5768	quiescin Q6	5,39	chr1
RAB11FIP2	22841	RAB11 family interacting protein 2 (class I)	2,07	chr10
RAB11FIP5	26056	RAB11 family interacting protein 5 (class I)	4,01	chr2
RAB12	201475	RAB12, member RAS oncogene family	6,19	chr18
RAB18	22931	RAB18, member RAS oncogene family	2,36	chr10
RAB2	5862	RAB2, member RAS oncogene family	2,97	chr8
RAB22A	57403	RAB22A, member RAS oncogene family	3,54	chr20
RAB23	51715	RAB23, member RAS oncogene family	4,32	chr6
RAB27A	5873	RAB27A, member RAS oncogene family	4,20	chr15
RAB27B	5874	RAB27B, member RAS oncogene family	9,99	chr18
RAB30	27314	RAB30, member RAS oncogene family	11,08	chr11
RAB31	11031	RAB31, member RAS oncogene family	4,87	chr18
RAB32	10981	RAB32, member RAS oncogene family	15,55	chr6
RAB33A	9363	RAB33A, member RAS oncogene family	2,53	chrX
RAB3B	5865	RAB3B, member RAS oncogene family	3,19	chr1
RAB3GAP1	22930	RAB3 GTPase activating protein subunit 1 (catalytic)	2,33	chr2
RAB40B	10966	RAB40B, member RAS oncogene family	6,49	chr17
RAB6A /// RAB6	5870 /// 84084	RAB6A, member RAS oncogene family /// RAB6C, member RAS oncogene far	2,01	chr2
RAB6IP2	23085	RAB6 interacting protein 2	2,73	chr12
RAB9B	51209	RAB9B, member RAS oncogene family	2,03	chrX
RABGEF1	27342	RAB guanine nucleotide exchange factor (GEF) 1	2,80	chr7
RAFTLIN	23180	raft-linking protein	42,35	chr3
RAGE	5891	renal tumor antigen	7,59	chr14
RAI1	10743	retinoic acid induced 1	3,94	chr17
RAI14	26064	retinoic acid induced 14	3,36	chr5
RALB	5899	v-ral simian leukemia viral oncogene homolog B (ras related; GTP binding prote	3,79	chr2
RaLP	399694	rai-like protein	3,49	chr15
RAP1A	5906	RAP1A, member of RAS oncogene family	2,74	chr1
RAP1GDS1	5910	RAP1, GTP-GDP dissociation stimulator 1	3,76	chr4
RAP2C	57826	RAP2C, member of RAS oncogene family	2,01	chrX
RAPH1	65059	Ras association (RalGDS/AF-6) and pleckstrin homology domains 1	5,11	chr2
RARB	5915	retinoic acid receptor, beta	9,28	chr3
RASA1	5921	RAS p21 protein activator (GTPase activating protein) 1	2,72	chr5
RASSF3	283349	Ras association (RalGDS/AF-6) domain family 3	3,54	chr14
RASSF4	83937	Ras association (RalGDS/AF-6) domain family 4	2,07	chr10
RASSF8	11228	Ras association (RalGDS/AF-6) domain family 8	2,01	chr12
RB1	5925	retinoblastoma 1 (including osteosarcoma)	2,97	chr13
RBL2	5934	retinoblastoma-like 2 (p130)	3,17	chr16
RBM18	92400	RNA binding motif protein 18	3,58	chr9
RBM24	221662	RNA binding motif protein 24	28,95	chr6
RBM9	23543	RNA binding motif protein 9	3,26	chr22
RBMS2	5939	RNA binding motif, single stranded interacting protein 2	3,74	chr12
RBMS3	27303	RNA binding motif, single stranded interacting protein	18,12	chr3
RCN1	5954	reticulocalbin 1, EF-hand calcium binding domain	2,85	chr11
RCN3	57333	reticulocalbin 3, EF-hand calcium binding domain	3,50	chr19

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RECK	8434	reversion-inducing-cysteine-rich protein with kazal motifs	7,09	chr9
RECQL	5965	RecQ protein-like (DNA helicase Q1-like)	3,08	chr12
REEP3	221035	Receptor accessory protein 3	4,45	chr10
RELA	5970	v-rel reticuloendotheliosis viral oncogene homolog A, nuclear factor of kappa lig	2,84	chr11
REV3L	5980	REV3-like, catalytic subunit of DNA polymerase zeta (yeast)	2,41	chr6
REXO2	25996	REX2, RNA exonuclease 2 homolog (S. cerevisiae)	2,08	chr11
RFK	55312	riboflavin kinase	2,94	chr9
RGL1	23179	ral guanine nucleotide dissociation stimulator-like 1	7,51	chr1
RGMB	285704	RGM domain family, member B	5,25	chr5
RGNEF	64283	Rho-guanine nucleotide exchange factor	3,79	chr5
RGS10	6001	regulator of G-protein signalling 10	2,66	chr10
RGS20	8601	regulator of G-protein signalling 20	2,53	chr8
RGS3	5998	regulator of G-protein signalling 3	8,93	chr9
RGS4	5999	regulator of G-protein signalling 4	133,63	chr1
RHBDL7	57414	rhomboid, veinlet-like 7 (Drosophila)	2,65	chr7
RHOB	388	ras homolog gene family, member B	2,95	chr2
RHOBTB1	9886	Rho-related BTB domain containing 1	3,16	chr10
RHOBTB3	22836	Rho-related BTB domain containing 3	26,55	chr5
RHOC	389	ras homolog gene family, member C	10,36	chr1
RHOG	391	ras homolog gene family, member G (rho G)	2,44	chr11
RHOJ	57381	ras homolog gene family, member J	13,07	chr14
RHOQ	23433	ras homolog gene family, member Q	2,45	chr2
RHOQ /// LOC28	23433 /// 284988	ras homolog gene family, member Q /// similar to ARHQ protein	3,10	chr2
RIG	10530	regulated in glioma	4,17	chr11
RIN2	54453	Ras and Rab interactor 2	37,07	chr20
RIOK3	8780	RIO kinase 3 (yeast) /// RIO kinase 3 (yeast)	2,29	chr18
RIPK1	8737	receptor (TNFRSF)-interacting serine-threonine kinase 1	3,05	chr6
RIPX	22902	rap2 interacting protein x	2,08	chr4
RIT1	6016	Ras-like without CAAX 1	2,38	chr1
RNASE4	6038	ribonuclease, RNase A family, 4	10,14	chr14
RND3	390	Rho family GTPase 3	7,69	chr2
RNF103	7844	ring finger protein 103	3,75	chr2
RNF11	26994	ring finger protein 11	2,28	chr1
RNF14	9604	ring finger protein 14	3,12	chr5
RNF150	57484	ring finger protein 150	2,03	chr4
RNF185	91445	ring finger protein 185	2,60	chr22
RNF19	25897	Ring finger protein 19	3,02	chr8
RNF6	6049	ring finger protein (C3H2C3 type) 6	3,18	chr13
RNH1	6050	ribonuclease/angiogenin inhibitor 1	3,39	chr11
RNPC2	9584	RNA-binding region (RNP1, RRM) containing 2	2,14	chr20
ROCK2	9475	Rho-associated, coiled-coil containing protein kinase 2	2,65	chr2
RP11-343N15.3	440608	Similar to Formin binding protein 2 (srGAP2)	2,41	chr1
RP11-378J18.4	375056	C219-reactive peptide	2,95	chr1
RP2	6102	retinitis pigmentosa 2 (X-linked recessive)	3,03	chrX
RPL23AP7	118433	ribosomal protein L23a pseudogene 7	3,44	chr1
RPRC1	55700	arginine/proline rich coiled-coil 1	6,11	chr1
RPS23	6228	ribosomal protein S23	4,98	chr5
RPS27L	51065	Ribosomal protein S27-like	4,27	chr15
RPS6KA2	6196	ribosomal protein S6 kinase, 90kDa, polypeptide 2	4,08	chr6
RPS6KA3	6197	ribosomal protein S6 kinase, 90kDa, polypeptide 3	3,21	chrX
RRAD	6236	Ras-related associated with diabetes	2,65	chr16
RRAGB	10325	Ras-related GTP binding B	2,23	chrX
RRAS	6237	related RAS viral (r-ras) oncogene homolog	16,59	chr19
RRBP1	6238	ribosome binding protein 1 homolog 180kDa (dog)	2,01	chr20
RSL1D1	26156	Ribosomal L1 domain containing 1	4,27	chr16
RSN	6249	restin (Reed-Steinberg cell-expressed intermediate filament-associated protein)	5,89	chr12
RSNL2	79745	restin-like 2	37,98	chr2
RSU1	6251	Ras suppressor protein 1	2,56	chr10
RTN4	57142	reticulon 4	2,24	chr2
RUNX1	861	runt-related transcription factor 1 (acute myeloid leukemia 1; aml1 oncogene)	37,16	chr21
RUNX2	860	runt-related transcription factor 2	10,68	chr6
RUSC2	9853	RUN and SH3 domain containing 2	3,56	chr9
RXRB	6257	retinoid X receptor, beta	2,65	chr6
S100A11	6282	S100 calcium binding protein A11 (calgizzarin)	11,04	chr1
S100A13	6284	S100 calcium binding protein A13	2,75	chr1
S100A16	140576	S100 calcium binding protein A16	14,87	chr1

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SACS	26278	spastic ataxia of Charlevoix-Saguenay (sacsin)	2,33	chr13
SAMD4	23034	sterile alpha motif domain containing 4	5,95	chr14
SAMD9	54809	sterile alpha motif domain containing 9	6,51	chr7
SAR1B	51128	SAR1 gene homolog B (S. cerevisiae)	3,44	chr5
SAT	6303	Spermidine/spermine N1-acetyltransferase	6,26	chrX
SATB2	23314	SATB family member 2	2,94	chr2
SATL1	340562	Spermidine/spermine N1-acetyl transferase-like 1	4,19	chrX
SBDS	51119	Shwachman-Bodian-Diamond syndrome	3,63	chr7
SBDS /// SBDSP	155370 /// 51119	Shwachman-Bodian-Diamond syndrome /// Shwachman-Bodian-Diamond sync	3,67	chr7
SBLF	11037	stoned B-like factor	3,58	chr2
SC65	10609	synaptonemal complex protein SC65	5,32	chr17
SCAP2	8935	src family associated phosphoprotein 2	2,24	chr7
SCARB2	950	scavenger receptor class B, member 2	3,11	chr4
SCARF2	91179	scavenger receptor class F, member 2	3,06	chr22
SCD5	79966	stearoyl-CoA desaturase 5	23,07	chr4
SCFD2	152579	sec1 family domain containing 2	2,52	chr4
SCG2	7857	secretogranin II (chromogranin C)	17,83	chr2
SCHIP1	29970	schwannomin interacting protein 1	2,68	chr3
SCML1	6322	sex comb on midleg-like 1 (Drosophila)	4,91	chrX
SCN9A	6335	sodium channel, voltage-gated, type IX, alpha	2,32	chr2
SCOC	60592	short coiled-coil protein	2,51	chr4
SCRG1	11341	scrapie responsive protein 1	3,04	chr4
SCRN3	79634	secernin 3	2,23	chr2
SCUBE3	222663	signal peptide, CUB domain, EGF-like 3	12,44	chr6
SDC1	6382	syndecan 1	2,43	chr2
SDC2	6383	syndecan 2 (heparan sulfate proteoglycan 1, cell surface-associated, fibroglyca	6,03	chr8
SDC3	9672	syndecan 3 (N-syndecan)	3,71	chr1
SDCCAG33	10194	serologically defined colon cancer antigen 33	6,84	chr18
SDF4	51150	stromal cell derived factor 4	3,46	chr1
SDSL	113675	serine dehydratase-like	2,61	chr12
SEC14L1	6397	SEC14-like 1 (S. cerevisiae)	2,54	chr17
SEC22L1	9554	SEC22 vesicle trafficking protein-like 1 (S. cerevisiae)	12,92	chr1
SEC23A	10484	Sec23 homolog A (S. cerevisiae)	5,11	chr14
SEC24A	10802	SEC24 related gene family, member A (S. cerevisiae)	2,31	chr5
SEC24D	9871	SEC24 related gene family, member D (S. cerevisiae)	5,55	chr4
SEC31L1	22872	SEC31-like 1 (S. cerevisiae)	3,56	chr4
SEC61A1	29927	Sec61 alpha 1 subunit (S. cerevisiae)	3,65	chr3
SEL1L	6400	sel-1 suppressor of lin-12-like (C. elegans)	8,09	chr14
SELM	140606	selenoprotein M	9,68	chr22
SELPLG	6404	selectin P ligand	2,08	chr12
SEMA3C	10512	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (sem	27,09	chr7
SEMA4F	10505	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and s	2,50	chr2
SEMA5A	9037	sema domain, seven thrombospondin repeats (type 1 and type 1-like), transme	5,01	chr5
SEPT6 /// N-PAC	23157 /// 84656	septin 6 /// cytokine-like nuclear factor n-pac	2,66	chrX
SERINC1	57515	serine incorporator 1	4,99	chr6
SERPINB6	5269	serpin peptidase inhibitor, clade B (ovalbumin), member 6	4,35	chr1
SERPINB7	8710	serpin peptidase inhibitor, clade B (ovalbumin), member 7	14,00	chr18
SERPINB8	5271	serpin peptidase inhibitor, clade B (ovalbumin), member 8	2,86	chr18
SERPINE1	5054	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1	201,36	chr7
SERTAD1	29950	SERTA domain containing 1	2,14	chr19
SERTAD2	9792	SERTA domain containing 2	6,31	chr2
SESTD1	91404	SEC14 and spectrin domains 1	2,06	chr2
SET7	80854	SET domain-containing protein 7	18,95	chr4
SEZ6L2	26470	seizure related 6 homolog (mouse)-like 2	2,28	chr16
SFRS11	9295	splicing factor, arginine/serine-rich 11	2,96	chr1
SFT2D2	375035	SFT2 domain containing 2	2,44	chr1
SFXN1	94081	sideroflexin 1	2,41	chr5
SFXN3	81855	sideroflexin 3 /// sideroflexin 3	7,99	chr10
SGCB	6443	sarcoglycan, beta (43kDa dystrophin-associated glycoprotein)	2,43	chr4
SGCD	6444	Sarcoglycan, delta (35kDa dystrophin-associated glycoprotein)	2,03	chr5
SGIP1	84251	SH3-domain GRB2-like (endophilin) interacting protein 1	6,24	chr1
SGK	6446	serum/glucocorticoid regulated kinase	2,20	chr6
SGPP1	81537	sphingosine-1-phosphate phosphatase 1	3,12	chr14
SGSH	6448	N-sulfoglucosamine sulfohydrolase (sulfamidase)	2,81	chr17
SH3BGRL	6451	SH3 domain binding glutamic acid-rich protein like	2,87	chrX
SH3BGRL3	83442	SH3 domain binding glutamic acid-rich protein like 3 /// SH3 domain binding glu	8,11	chr1

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SH3GLB1	51100	SH3-domain GRB2-like endophilin B1	3,88	chr1
SH3KBP1	30011	SH3-domain kinase binding protein 1	2,83	chrX
SH3MD1	9644	SH3 multiple domains 1	4,39	chr10
SH3MD2	57630	SH3 multiple domains 2	5,41	chr4
SH3MD4	344558	SH3 multiple domains 4	5,15	chr2
SH3RF2	153769	SH3 domain containing ring finger 2	3,56	chr5
SHB	6461	Src homology 2 domain containing adaptor protein B	2,10	chr9
SHC1	6464	SHC (Src homology 2 domain containing) transforming protein 1	2,21	chr1
SIDT2	51092	SID1 transmembrane family, member 2	3,03	chr11
SIL1	64374	SIL1 homolog, endoplasmic reticulum chaperone (S. cerevisiae)	7,07	chr5
SIRT2	22933	sirtuin (silent mating type information regulation 2 homolog) 2 (S. cerevisiae)	2,87	chr19
SIX1	6495	Sine oculis homeobox homolog 1 (Drosophila)	112,74	chr14
SLC10A3	8273	solute carrier family 10 (sodium/bile acid cotransporter family), member 3	2,72	chrX
SLC12A2	6558	solute carrier family 12 (sodium/potassium/chloride transporters), member 2	2,07	chr5
SLC12A4	6560	solute carrier family 12 (potassium/chloride transporters), member 4	2,84	chr16
SLC16A4	9122	Solute carrier family 16 (monocarboxylic acid transporters), member 4	10,73	chr1
SLC16A7	9194	solute carrier family 16 (monocarboxylic acid transporters), member 7	4,54	chr12
SLC17A5	26503	solute carrier family 17 (anion/sugar transporter), member 5	7,10	chr6
SLC18A2	6571	Solute carrier family 18 (vesicular monoamine), member 2	2,49	chr10
SLC1A4	6509	solute carrier family 1 (glutamate/neutral amino acid transporter), member 4	23,28	chr2
SLC20A2	6575	solute carrier family 20 (phosphate transporter), member 2	2,33	chr8
SLC22A18	5002	solute carrier family 22 (organic cation transporter), member 18	4,89	chr11
SLC22A4	6583	solute carrier family 22 (organic cation transporter), member 4	2,24	chr5
SLC25A16	8034	Solute carrier family 25 (mitochondrial carrier; Graves disease autoantigen), me	4,55	chr10
SLC25A20	788	solute carrier family 25 (carnitine/acylcarnitine translocase), member 20	2,63	chr3
SLC25A24	29957	solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 24	2,07	chr1
SLC25A32	81034	solute carrier family 25, member 32 /// solute carrier family 25, member 32	2,69	chr8
SLC26A2	1836	solute carrier family 26 (sulfate transporter), member 2	2,04	chr5
SLC26A5	375611	Solute carrier family 26, member 5 (prestin)	2,72	chr7
SLC2A10	81031	solute carrier family 2 (facilitated glucose transporter), member 10 /// solute car	5,13	chr20
SLC30A5	64924	solute carrier family 30 (zinc transporter), member 5	2,22	chr5
SLC30A7	148867	solute carrier family 30 (zinc transporter), member 7	4,96	chr1
SLC31A2	1318	solute carrier family 31 (copper transporters), member 2	3,06	chr9
SLC35A3	23443	solute carrier family 35 (UDP-N-acetylglucosamine (UDP-GlcNAc) transporter),	2,31	chr1
SLC35B2	347734	solute carrier family 35, member B2	2,47	chr6
SLC35B3	51000	solute carrier family 35, member B3	4,68	chr6
SLC35C1	55343	solute carrier family 35, member C1	2,03	chr11
SLC35D1	23169	solute carrier family 35 (UDP-glucuronic acid/UDP-N-acetylgalactosamine dual	6,07	chr1
SLC35E1	79939	solute carrier family 35, member E1	3,25	chr19
SLC35F5	80255	solute carrier family 35, member F5	4,00	chr2
SLC39A10	57181	Solute carrier family 39 (zinc transporter), member 10	2,23	chr2
SLC39A13	91252	solute carrier family 39 (zinc transporter), member 13	2,82	chr11
SLC39A6	25800	solute carrier family 39 (zinc transporter), member 6	2,72	chr18
SLC41A2	84102	solute carrier family 41, member 2	2,05	chr12
SLC41A3	54946	solute carrier family 41, member 3	2,02	chr3
SLC4A4	8671	solute carrier family 4, sodium bicarbonate cotransporter, member 4	5,47	chr4
SLC7A11	23657	solute carrier family 7, (cationic amino acid transporter, y+ system) member 11	3,15	chr4
SLC7A6	9057	solute carrier family 7 (cationic amino acid transporter, y+ system), member 6	2,01	chr16
SLC8A1	6546	solute carrier family 8 (sodium/calcium exchanger), member 1	21,76	chr2
SLIT3	6586	slit homolog 3 (Drosophila)	3,10	chr5
SLITL2	114990	slit-like 2 (Drosophila)	3,55	chr16
SMAD3	4088	SMAD, mothers against DPP homolog 3 (Drosophila)	9,44	chr15
SMAP1L	64744	stromal membrane-associated protein 1-like	4,65	chr1
SMARCA2	6595	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, su	3,65	chr9
SMARCD3	6604	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, su	9,97	chr7
SMBP	56889	SM-11044 binding protein	2,39	chr10
SMC5L1	23137	SMC5 structural maintenance of chromosomes 5-like 1 (yeast)	2,42	chr9
SMILE	160418	SMILE protein	2,59	chr12
SMPD1	6609	sphingomyelin phosphodiesterase 1, acid lysosomal (acid sphingomyelinase)	3,77	chr11
SMPDL3A	10924	sphingomyelin phosphodiesterase, acid-like 3A	5,13	chr6
SMURF2	64750	SMAD specific E3 ubiquitin protein ligase 2	12,21	chr17
SMYD2	56950	SET and MYND domain containing 2	2,18	chr1
SNAG1	112574	Sorting nexin associated golgi protein 1	2,44	chr5
SNAI2	6591	snail homolog 2 (Drosophila)	52,09	chr8
SNF1LK	150094	SNF1-like kinase /// SNF1-like kinase	4,50	chr10
SNTB2	6645	syntrophin, beta 2 (dystrophin-associated protein A1, 59kDa, basic component	2,26	chr16

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
SNX13	23161	Sorting nexin 13	2,65	chr7
SNX14	57231	sorting nexin 14	2,58	chr6
SNX19	399979	sorting nexin 19	3,68	chr11
SNX3	8724	sorting nexin 3	3,05	chr6
SNX9	51429	sorting nexin 9	2,01	chr6
SOAT1	6646	sterol O-acyltransferase (acyl-Coenzyme A: cholesterol acyltransferase) 1	6,88	chr1
SOCS3	9021	suppressor of cytokine signaling 3	4,08	chr17
SOCS5	9655	suppressor of cytokine signaling 5	4,44	chr2
SOD3	6649	superoxide dismutase 3, extracellular	2,35	chr4
SORBS2	8470	sorbin and SH3 domain containing 2	4,04	chr4
SOX9	6662	SRY (sex determining region Y)-box 9 (campomelic dysplasia, autosomal sex-r	2,60	chr17
SP100	6672	nuclear antigen Sp100	24,52	chr2
SP110	3431	SP110 nuclear body protein	2,20	chr2
SPAG9	9043	sperm associated antigen 9	2,10	chr17
SPARC	6678	secreted protein, acidic, cysteine-rich (osteonectin)	42,54	chr5
SPATA18	132671	spermatogenesis associated 18 homolog (rat)	7,26	chr4
SPATA20	64847	spermatogenesis associated 20	2,71	chr17
SPATS2	65244	spermatogenesis associated, serine-rich 2	3,85	chr12
SPCS3	60559	signal peptidase complex subunit 3 homolog (S. cerevisiae)	2,77	chr4
SPHK1	8877	sphingosine kinase 1	23,77	chr17
SPIRE1	56907	spire homolog 1 (Drosophila)	2,55	chr18
SPOCD1	90853	SPOC domain containing 1	39,33	chr1
SPOCK	6695	sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican)	6,42	chr5
SPOP	8405	speckle-type POZ protein	2,45	chr17
SPSB1	80176	splA/ryanodine receptor domain and SOCS box containing 1	4,31	chr1
SPTAN1	6709	Spectrin, alpha, non-erythrocytic 1 (alpha-fodrin) /// CDNA FLJ44613 fis, clone	5,43	chr9
SPTBN1	6711	Spectrin, beta, non-erythrocytic 1	25,86	chr2
SQRDL	58472	sulfide quinone reductase-like (yeast)	8,57	chr15
SQSTM1	8878	sequestosome 1	3,18	chr5
SRA1	10011	steroid receptor RNA activator 1	2,05	chr5
SRGAP1	57522	SLIT-ROBO Rho GTPase activating protein 1	3,81	chr12
SRGAP2	23380	SLIT-ROBO Rho GTPase activating protein 2	3,23	chr1
SRPR	6734	signal recognition particle receptor ('docking protein')	5,02	chr11
SRPRB	58477	signal recognition particle receptor, B subunit	2,52	chr3
SRPX	8406	sushi-repeat-containing protein, X-linked	7,97	chrX
SRPX2	27286	sushi-repeat-containing protein, X-linked 2	18,18	chrX
SRR	63826	serine racemase	3,70	chr17
SRXN1	140809	sulfiredoxin 1 homolog (S. cerevisiae)	2,09	chr20
SSFA2	6744	sperm specific antigen 2	29,01	chr2
SSH1	54434	slingshot homolog 1 (Drosophila)	7,13	chr12
SSPN	8082	sarcospan (Kras oncogene-associated gene)	16,19	chr12
SSR1	6745	Signal sequence receptor, alpha (translocon-associated protein alpha)	3,33	chr6
SSR2	6746	signal sequence receptor, beta (translocon-associated protein beta)	2,83	chr1
SSR3	6747	signal sequence receptor, gamma (translocon-associated protein gamma)	7,07	chr3
ST3GAL1	6482	ST3 beta-galactoside alpha-2,3-sialyltransferase 1	5,49	chr8
ST3GAL3	6487	ST3 beta-galactoside alpha-2,3-sialyltransferase 3	2,44	chr1
ST3GAL5	8869	ST3 beta-galactoside alpha-2,3-sialyltransferase 5	15,77	chr2
ST5	6764	suppression of tumorigenicity 5	2,16	chr11
ST7	7982	suppression of tumorigenicity 7	2,02	chr7
STAM2	10254	signal transducing adaptor molecule (SH3 domain and ITAM motif) 2	3,97	chr2
STARD13	90627	START domain containing 13	7,46	chr13
STAT1	6772	signal transducer and activator of transcription 1, 91kDa	2,12	(vide)
STAT2	6773	signal transducer and activator of transcription 2, 113kDa	2,11	chr12
STAT3	6774	signal transducer and activator of transcription 3 (acute-phase response factor)	2,17	chr17
STAT6	6778	signal transducer and activator of transcription 6, interleukin-4 induced	2,49	chr12
STC2	8614	stanniocalcin 2	6,38	chr5
STCH	6782	stress 70 protein chaperone, microsome-associated, 60kDa	2,70	chr21
STK10	6793	serine/threonine kinase 10	2,21	chr5
STK17A	9263	Serine/threonine kinase 17a (apoptosis-inducing)	6,55	chr7
STK17B	9262	Basic leucine zipper and W2 domains 1	13,41	chr2
STK32B	55351	serine/threonine kinase 32B	4,59	chr4
STOML1	9399	stomatin (EPB72)-like 1	3,40	chr15
STS	412	steroid sulfatase (microsomal), arylsulfatase C, isozyme S	2,37	chrX
STS-1	84959	Cbl-interacting protein Sts-1	13,09	chr11
STX12	23673	syntaxin 12	8,02	chr1
STX5A	6811	syntaxin 5A	2,81	chr11

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STXBP1	6812	syntaxin binding protein 1	2,79	chr9
SULF1	23213	sulfatase 1	89,16	chr8
SUMF1	285362	sulfatase modifying factor 1	2,32	chr3
SUPT6H	6830	suppressor of Ty 6 homolog (S. cerevisiae)	2,27	chr17
SURF4	6836	surfeit 4	2,15	chr9
SUSD1	64420	sushi domain containing 1	2,64	chr9
SYBL1	6845	synaptobrevin-like 1	2,90	chrX
SYDE1	85360	synapse defective 1, Rho GTPase, homolog 1 (C. elegans)	3,99	chr19
SYNE1	23345	spectrin repeat containing, nuclear envelope 1	14,30	chr6
SYNJ1	8867	synaptojanin 1	2,29	chr21
SYNJ2	8871	synaptojanin 2	7,52	chr6
SYNPO	11346	synaptopodin	25,03	chr5
SYNPO2	171024	synaptopodin 2	32,72	chr4
SYTL2	54843	synaptotagmin-like 2	5,76	chr11
SYTL4	94121	Synaptotagmin-like 4 (granuphilin-a)	3,38	chrX
TACC1	6867	transforming, acidic coiled-coil containing protein 1	8,32	chr8
TAF13	6884	TAF13 RNA polymerase II, TATA box binding protein (TBP)-associated factor,	2,18	chr1
TAGLN	6876	transgelin	25,80	chr11
TAGLN2	8407	transgelin 2	6,46	chr1
TANC	85461	TPR domain, ankyrin-repeat and coiled-coil-containing	9,37	chr2
TANK	10010	TRAF family member-associated NFKB activator	4,16	chr2
TAPBP	6892	TAP binding protein (tapasin)	2,27	chr6
TAX1BP3	30851	Tax1 (human T-cell leukemia virus type I) binding protein 3	3,35	chr17
TBC1D10B	26000	TBC1 domain family, member 10B	2,05	chr16
TBC1D12	23232	TBC1 domain family, member 12	4,02	chr10
TBC1D19	55296	TBC1 domain family, member 19	2,57	chr4
TBC1D2	55357	TBC1 domain family, member 2	3,50	chr9
TBC1D20	128637	TBC1 domain family, member 20	2,22	chr20
TBL1X	6907	transducin (beta)-like 1X-linked	2,04	chrX
TBL2	26608	transducin (beta)-like 2	2,31	chr7
TBX2	6909	T-box 2	3,54	chr17
TBX3	6926	T-box 3 (ulnar mammary syndrome)	5,02	chr12
TCEA3	6920	transcription elongation factor A (SII), 3	5,15	chr1
TCEAL1	9338	transcription elongation factor A (SII)-like 1	2,94	chrX
TCEAL3	85012	transcription elongation factor A (SII)-like 3	3,89	chrX
TCEB1	6921	transcription elongation factor B (SIII), polypeptide 1 (15kDa, elongin C)	2,02	chr8
TCF8	6935	transcription factor 8 (represses interleukin 2 expression)	15,59	chr10
TCIRG1	10312	T-cell, immune regulator 1, ATPase, H+ transporting, lysosomal V0 protein a is	2,21	chr11
TCP11L1	55346	t-complex 11 (mouse) like 1	3,21	chr11
TCTA	6988	T-cell leukemia translocation altered gene	2,52	chr3
TCTE1L	6990	t-complex-associated-testis-expressed 1-like	4,95	chr20
TCTE3	6991	t-complex-associated-testis-expressed 3	2,17	chr6
TDE1	10955	tumor differentially expressed 1	3,61	chr20
TEAD1	7003	TEA domain family member 1 (SV40 transcriptional enhancer factor)	2,79	chr11
TERF2	7014	telomeric repeat binding factor 2	2,51	chr16
TERF2IP	54386	telomeric repeat binding factor 2, interacting protein	3,89	chr16
TES	26136	testis derived transcript (3 LIM domains)	4,38	chr7
TESK1	7016	testis-specific kinase 1	2,11	chr9
TEX261	113419	testis expressed sequence 261	3,48	chr2
TFAP2A	7020	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)	16,14	chr6
TFG	10342	TRK-fused gene	2,05	chr3
TFPI	7035	tissue factor pathway inhibitor (lipoprotein-associated coagulation inhibitor)	3,89	chr2
TGFB1	7040	transforming growth factor, beta 1 (Camurati-Engelmann disease)	2,33	chr19
TGFB1I1	7041	transforming growth factor beta 1 induced transcript 1	32,03	chr16
TGFB2	7042	Transforming growth factor, beta 2	86,91	chr1
TGFBI	7045	transforming growth factor, beta-induced, 68kDa	112,99	chr5
TGFBR1	7046	Transforming growth factor, beta receptor I (activin A receptor type II-like kinase	2,27	chr9
TGFBR2	7048	transforming growth factor, beta receptor II (70/80kDa)	11,19	chr3
TGM2	7052	transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransfera	24,74	chr20
TGOLN2	10618	trans-golgi network protein 2	4,37	chr2
THBD	7056	thrombomodulin	6,10	chr20
THBS1	7057	thrombospondin 1	76,57	chr15
THBS2	7058	thrombospondin 2	22,66	chr6
THBS3	7059	thrombospondin 3	4,99	chr1
THRAP2	23389	Thyroid hormone receptor associated protein 2	7,06	chr12
THSD4	79875	Thrombospondin, type I, domain containing 4	4,83	chr15

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TICAM2	353376	toll-like receptor adaptor molecule 2	8,89	chr5
TIFA	92610	TRAF-interacting protein with a forkhead-associated domain	5,27	chr4
TIMM17A	10440	translocase of inner mitochondrial membrane 17 homolog A (yeast)	2,14	chr1
TIMP1	7076	TIMP metallopeptidase inhibitor 1	6,85	chrX
TIMP2	7077	TIMP metallopeptidase inhibitor 2	14,70	chr17
TIMP3	7078	TIMP metallopeptidase inhibitor 3 (Sorsby fundus dystrophy, pseudoinflammato	52,32	chr22
TIPARP	25976	TCDD-inducible poly(ADP-ribose) polymerase	10,37	chr3
TIPRL	261726	TIP41, TOR signalling pathway regulator-like (S. cerevisiae)	3,33	chr1
TK2	7084	thymidine kinase 2, mitochondrial	5,02	chr16
TLOC1	7095	translocation protein 1	3,35	chr3
TLR4	7099	toll-like receptor 4 /// toll-like receptor 4	4,58	chr9
TM2D1	83941	TM2 domain containing 1	3,12	chr1
TM4SF1	4071	transmembrane 4 L six family member 1	48,84	chr3
TM7SF1	7107	transmembrane 7 superfamily member 1 (upregulated in kidney)	2,27	chr1
TM9SF1	10548	transmembrane 9 superfamily member 1	2,73	chr14
TMBIM1	64114	transmembrane BAX inhibitor motif containing 1	2,78	chr2
TMCO1	54499	transmembrane and coiled-coil domains 1	2,37	chr1
TMCO3	55002	transmembrane and coiled-coil domains 3	4,78	chr13
TMED3	23423	transmembrane emp24 protein transport domain containing 3	2,28	chr15
TMED4	222068	transmembrane emp24 protein transport domain containing 4	2,57	chr7
TMED5	50999	transmembrane emp24 protein transport domain containing 5	2,16	chr1
TMED7	51014	transmembrane emp24 protein transport domain containing 7	2,44	chr5
TMEM14A	28978	transmembrane protein 14A	2,43	chr6
TMEM16D	121601	transmembrane protein 16D	2,46	chr12
TMEM16F	196527	transmembrane protein 16F	2,61	chr12
TMEM17	200728	transmembrane protein 17	2,04	chr2
TMEM30A	55754	transmembrane protein 30A	7,85	chr6
TMEM43	79188	transmembrane protein 43	2,80	chr3
TMEM45A	55076	transmembrane protein 45A	2,67	chr3
TMEM47	83604	transmembrane protein 47	2,45	chrX
TMEM49	81671	transmembrane protein 49	4,57	chr17
TMEM5	10329	transmembrane protein 5	4,10	chr12
TMEM50B	757	transmembrane protein 50B	4,91	chr21
TMEM55A	55529	transmembrane protein 55A	2,21	chr8
TMEM65	157378	transmembrane protein 65	3,26	chr8
TMEM76	138050	transmembrane protein 76	10,31	chr8
TMEM87B	84910	Transmembrane protein 87B	4,46	chr2
TMEM9B	56674	TMEM9 domain family, member B	2,23	chr11
TMF1	7110	TATA element modulatory factor 1	2,82	chr3
TMOD3	29766	tropomodulin 3 (ubiquitous)	3,17	chr15
TMSB10	9168	thymosin, beta 10	2,57	chr2
TNC	3371	tenascin C (hexabrachion)	56,43	chr9
TncRNA	283131	trophoblast-derived noncoding RNA	16,78	chr11
TNFAIP1	7126	tumor necrosis factor, alpha-induced protein 1 (endothelial)	7,01	chr17
TNFAIP3	7128	tumor necrosis factor, alpha-induced protein 3	6,10	chr6
TNFAIP6	7130	tumor necrosis factor, alpha-induced protein 6	2,49	chr2
TNFRSF10B	8795	tumor necrosis factor receptor superfamily, member 10b	4,42	chr8
TNFRSF10D	8793	tumor necrosis factor receptor superfamily, member 10d, decoy with truncated	17,91	chr8
TNFRSF1A	7132	tumor necrosis factor receptor superfamily, member 1A	6,21	chr12
TNFSF4	7292	tumor necrosis factor (ligand) superfamily, member 4 (tax-transcriptionally activ	8,61	chr1
TNIP1	10318	TNFAIP3 interacting protein 1	2,96	chr5
TNS1	7145	tensin 1 /// tensin 1	72,39	chr2
TNS3	64759	Tensin 3	4,74	chr7
TOR1AIP2	163590	Torsin A interacting protein 2	2,79	chr1
TP53INP1	94241	tumor protein p53 inducible nuclear protein 1	2,62	chr8
TP53INP2	58476	tumor protein p53 inducible nuclear protein 2	2,64	chr20
TPCN1	53373	two pore segment channel 1	2,75	chr12
TPM1	7168	Tropomyosin 1 (alpha)	7,72	chr15
TPM2	7169	tropomyosin 2 (beta)	7,37	chr9
TPM3	7170 /// 7171	tropomyosin 3 /// tropomyosin 4	7,84	chr3
TPM4	7171	tropomyosin 4	6,47	chr3
TPST1	8460	tyrosylprotein sulfotransferase 1	3,35	chr7
TRA1	7184	tumor rejection antigen (gp96) 1	2,05	(vide)
TRADD	8717	TNFRSF1A-associated via death domain	4,41	chr16
TRAF3	7187	TNF receptor-associated factor 3	3,00	chr14
TRAM1	23471	translocation associated membrane protein 1	2,74	chr8

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TRAM2	9697	translocation associated membrane protein 2	13,77	chr6
TRAPPC1	58485	trafficking protein particle complex 1	3,18	chr17
TRAPPC3	27095	trafficking protein particle complex 3	2,12	chr1
TRHDE	29953	thyrotropin-releasing hormone degrading enzyme	10,58	chr12
TRIB3	57761	tribbles homolog 3 (Drosophila)	5,27	chr20
TRIM16	10626 /// 147166	tripartite motif-containing 16 /// similar to tripartite motif-containing 16; estrogen-	6,36	chr17
TRIM22	10346	tripartite motif-containing 22	5,53	chr11
TRIM34	445372 /// 53840	tripartite motif-containing 34 /// tripartite motif-containing 6 and tripartite motif-co	2,06	chr11
TRIM44	54765	tripartite motif-containing 44	2,29	chr11
TRIM5	85363	tripartite motif-containing 5	2,89	chr11
TRIM50B	375593	tripartite motif-containing 50B	2,24	chr7
TRIM56	81844	Tripartite motif-containing 56	2,32	chr7
TRIM58	25893	tripartite motif-containing 58	4,25	chr1
TRIM62	55223	tripartite motif-containing 62	2,54	chr1
TRIM8	81603	tripartite motif-containing 8 /// tripartite motif-containing 8	3,71	chr10
TRIO	7204	triple functional domain (PTPRF interacting)	3,18	chr5
TRIOBP	11078	TRIO and F-actin binding protein	2,09	chr22
TRIP11	9321	thyroid hormone receptor interactor 11	2,29	chr14
TRPC4	7223	transient receptor potential cation channel, subfamily C, member 4	3,31	chr13
TRPS1	7227	trichorhinophalangeal syndrome I	4,44	chr8
TSC22D2	9819	TSC22 domain family, member 2	2,33	chr3
TSPAN10	83882	tetraspanin 10	2,35	chr17
TSPAN31	6302	tetraspanin 31	2,16	chr12
TSPAN5	10098	tetraspanin 5 /// tetraspanin 5	4,10	chr4
TTC3	7267	tetratricopeptide repeat domain 3	26,78	chr21
TTC8	123016	tetratricopeptide repeat domain 8	2,88	chr14
TTYH2	94015	tweety homolog 2 (Drosophila)	2,18	chr17
TTYH3	80727	tweety homolog 3 (Drosophila)	2,65	chr7
TUBA3	7846	tubulin, alpha 3	2,00	chr12
TUFT1	7286	tuftelin 1	4,04	chr1
TULP3	7289	tubby like protein 3	2,11	chr12
TWIST1	7291	twist homolog 1 (acrocephalosyndactyly 3; Saethre-Chotzen syndrome) (Droso	10,84	chr7
TWSG1	57045	twisted gastrulation homolog 1 (Drosophila)	3,64	chr18
TXNDC10	54495	thioredoxin domain containing 10	3,71	chr18
TXNDC11	51061	thioredoxin domain containing 11	3,94	chr16
TXNDC13	56255	thioredoxin domain containing 13	2,65	chr20
TXNIP	10628	thioredoxin interacting protein	11,94	chr1
TXNRD1	7296	thioredoxin reductase 1	3,06	chr12
TXNRD3	114112	thioredoxin reductase 3	2,06	chr3
UACA	55075	uveal autoantigen with coiled-coil domains and ankyrin repeats	5,87	chr15
UAP1	6675	UDP-N-acteylglucosamine pyrophosphorylase 1	5,83	chr1
UBE2B	7320	ubiquitin-conjugating enzyme E2B (RAD6 homolog) /// ubiquitin-conjugating en	2,59	chr5
UBE2H	7328	Ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast)	4,72	chr7
UBE2J1	51465	ubiquitin-conjugating enzyme E2, J1 (UBC6 homolog, yeast)	10,53	chr6
UBE2Q2	92912	ubiquitin-conjugating enzyme E2Q (putative) 2	2,76	chr15
UBE2W	55284	ubiquitin-conjugating enzyme E2W (putative)	2,32	chr8
UBL3	5412	ubiquitin-like 3	2,60	chr13
UBXD1	80700	UBX domain containing 1	3,08	chr19
UEV3	55293	Ubiquitin-conjugating enzyme E2-like	8,22	chr11
UFM1	51569	ubiquitin-fold modifier 1	3,62	chr13
UGCG	7357	UDP-glucose ceramide glucosyltransferase	4,24	chr9
UGCGL1	56886	UDP-glucose ceramide glucosyltransferase-like 1	2,14	chr2
UGCGL2	55757	UDP-glucose ceramide glucosyltransferase-like 2	4,64	chr13
UHMK1	127933	U2AF homology motif (UHM) kinase 1	6,04	chr1
ULBP2	80328	UL16 binding protein 2	24,08	chr6
ULK2	9706	unc-51-like kinase 2 (C. elegans)	2,16	chr17
UNC84B	25777	unc-84 homolog B (C. elegans)	2,72	chr22
UNQ1912	345757	HGS_RE408	5,13	chr5
URB	151887	steroid sensitive gene 1	147,43	chr3
UROS	7390	uroporphyrinogen III synthase (congenital erythropoietic porphyria)	2,02	chr10
USP15	9958	ubiquitin specific peptidase 15	2,63	chr12
USP3	9960	ubiquitin specific peptidase 3	8,33	chr15
USP30	84749	Ubiquitin specific peptidase 30	2,13	chr12
USP38	84640	ubiquitin specific peptidase 38	2,19	chr4
USP40	55230	ubiquitin specific peptidase 40	2,38	chr2
USP47	55031	ubiquitin specific peptidase 47	2,44	chr11

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USP53	54532	ubiquitin specific peptidase 53	3,74	chr4
VAMP3	9341	vesicle-associated membrane protein 3 (cellubrevin) /// vesicle-associated men	3,14	chr1
VAMP4	8674	vesicle-associated membrane protein 4	2,99	chr1
VCAM1	7412	vascular cell adhesion molecule 1	18,34	chr1
VCPIP1	80124	Valosin containing protein (p97)/p47 complex interacting protein 1	2,83	chr8
VDR	7421	vitamin D (1,25- dihydroxyvitamin D3) receptor	3,81	chr12
VEGF	7422	vascular endothelial growth factor	3,89	chr6
VEGFC	7424	vascular endothelial growth factor C	28,06	chr4
VEPH1	79674	ventricular zone expressed PH domain homolog 1 (zebrafish)	16,65	chr3
VGCNL1	259232	Voltage gated channel like 1	6,11	chr13
VGL-3	389136	vestigial-like 3	26,25	chr3
VIM	7431	vimentin	4,65	chr10
VPS13B	157680	vacuolar protein sorting 13B (yeast)	2,03	chr8
VPS13C	54832	Vacuolar protein sorting 13C (yeast)	2,20	chr15
VPS24	51652	vacuolar protein sorting 24 (yeast)	5,78	chr2
WARS	7453	tryptophanyl-tRNA synthetase	2,30	chr14
WASPIP	7456	Wiskott-Aldrich syndrome protein interacting protein	12,00	chr2
WBP5	51186	WW domain binding protein 5	2,61	chrX
WDR1	9948	WD repeat domain 1	2,33	chr4
WDR13	64743	WD repeat domain 13	3,13	chrX
WDR26	80232	WD repeat domain 26	3,10	chr1
WDR32	79269	WD repeat domain 32	3,48	chr9
WDR41	55255	WD repeat domain 41	3,20	chr5
WDR47	22911	WD repeat domain 47	4,32	chr1
WDR5B	54554	WD repeat domain 5B	2,58	chr3
WDR68	10238	WD repeat domain 68	3,46	chr17
WHDC1L2	440253	WAS protein homology region 2 domain containing 1-like 1	2,46	chr15
WIG1	64393	p53 target zinc finger protein	14,99	chr3
WIPI49	55062	WD40 repeat protein Interacting with phosphoInositides of 49kDa	9,13	chr17
WNT5B	81029	wingless-type MMTV integration site family, member 5B /// wingless-type MMTV	11,48	chr12
WSB2	55884	WD repeat and SOCS box-containing 2	2,97	chr12
WWTR1	25937	WW domain containing transcription regulator 1	6,13	chr3
XPA	7507	xeroderma pigmentosum, complementation group A	2,26	chr9
XRN1	54464	5'-3' exoribonuclease 1	2,40	chr3
YIF1A	10897	Yip1 interacting factor homolog A (S. cerevisiae)	2,35	chr11
YIPF3	25844	Yip1 domain family, member 3	2,44	chr6
YIPF4	84272	Yip1 domain family, member 4	3,37	chr2
YIPF5	81555	Yip1 domain family, member 5	8,82	chr5
YKT6	10652	SNARE protein Ykt6	2,31	chr7
YME1L1	10730	YME1-like 1 (S. cerevisiae)	2,11	chr10
YPEL2	388403	yippee-like 2 (Drosophila)	3,21	chr17
YPEL5	51646	yippee-like 5 (Drosophila)	5,35	chr2
YSG2	54414	Ysg2 homolog (mouse) /// Ysg2 homolog (mouse)	6,08	chr11
YWHAZ	7534	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, z	2,63	chr8
ZADH2	284273	zinc binding alcohol dehydrogenase, domain containing 2	9,43	chr18
ZAK	51776	sterile alpha motif and leucine zipper containing kinase AZK	24,60	chr2
ZBTB1	22890	zinc finger and BTB domain containing 1	3,05	chr14
ZBTB20	26137	zinc finger and BTB domain containing 20	4,00	chr3
ZBTB38	253461	zinc finger and BTB domain containing 38	4,45	chr3
ZBTB4	57659	zinc finger and BTB domain containing 4	3,29	chr17
ZBTB41	360023	zinc finger and BTB domain containing 41	4,03	chr1
ZC3H11A	9877	zinc finger CCCH-type containing 11A	8,18	chr1
ZC3H7A	29066	zinc finger CCCH-type containing 7A	2,09	chr16
ZCSL2	285381	zinc finger, CSL-type containing 2	3,05	chr3
ZDHHC24	254359	zinc finger, DHHC-type containing 24	2,06	chr19
ZDHHC9	51114	Zinc finger, DHHC-type containing 9	2,07	chrX
ZFHX1B	9839	zinc finger homeobox 1b	7,83	chr2
ZFHX4	79776	zinc finger homeodomain 4	3,04	chr8
ZFP91	80829	zinc finger protein 91 homolog (mouse)	2,38	chr11
ZFPL1	7542	zinc finger protein-like 1	4,15	chr11
ZFPM2	23414	zinc finger protein, multitype 2	7,09	chr8
ZHX1	11244	zinc fingers and homeoboxes 1	5,41	chr8
ZHX3	23051	zinc fingers and homeoboxes 3	2,66	chr20
ZKSCAN1	7586	Zinc finger with KRAB and SCAN domains 1	5,07	chr7
ZMYM6	9204	zinc finger, MYM-type 6	2,79	chr1
ZMYND11	10771	zinc finger, MYND domain containing 11	2,49	chr10

Stem Cells and Development
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Table S4 : Genes overexpressed in MPC compared to hES (Fold Change > 2; a < 0.05)

Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
ZNF148	7707	Zinc finger protein 148 (pHZ-52)	3,84	chr3
ZNF185	7739	zinc finger protein 185 (LIM domain)	4,14	chrX
ZNF226	7769	zinc finger protein 226	4,59	chr19
ZNF236	7776	zinc finger protein 236	2,07	chr18
ZNF25	219749	zinc finger protein 25 (KOX 19)	9,71	chr10
ZNF275	10838	zinc finger protein 275	2,60	chrX
ZNF294	26046	zinc finger protein 294	2,01	chr21
ZNF343	79175	zinc finger protein 343	2,26	chr20
ZNF365	22891	zinc finger protein 365	2,90	chr10
ZNF410	57862	zinc finger protein 410	2,65	chr14
ZNF436	80818	zinc finger protein 436	4,14	chr1
ZNF469	84627	zinc finger protein 469	7,92	chr16
ZNF503	84858	zinc finger protein 503	8,48	chr10
ZNF516	9658	zinc finger protein 516	2,00	chr18
ZNF537	57616	zinc finger protein 537	4,61	chr19
ZNF548	147694	zinc finger protein 548	3,71	chr19
ZNF575	284346	zinc finger protein 575	2,66	chr19
ZNF599	148103	zinc finger protein 599	2,09	chr19
ZNF650	130507	zinc finger protein 650	2,13	chr2
ZNF654	55279	Zinc finger protein 654	2,78	chr3
ZNF70	7621	Zinc finger protein 70 (Cos17)	5,07	chr22
ZNF703	80139	zinc finger protein 703	12,46	chr8
ZNF710	374655	Zinc finger protein 710	8,07	chr15
ZNHIT1	10467	zinc finger, HIT type 1	2,48	chr7
ZSWIM6	57688	zinc finger, SWIM-type containing 6	3,36	chr5
ZYX	7791	zyxin	5,69	chr7
		(vide)	66,75	chr17
		wingless-type MMTV integration site family, member 5A /// wingless-type MMTV	37,13	chr2
		syncoilin, intermediate filament 1 /// syncoilin, intermediate filament 1	9,57	chr3
		protein kinase C, alpha	6,99	chr5
		Similar to mitochondrial carrier triple repeat 1	6,41	chr5
		Fucosyltransferase 1 (galactoside 2-alpha-L-fucosyltransferase, H blood group)	4,06	chrY
		sterol carrier protein 2 /// sterol carrier protein 2	2,44	(vide)
		transmembrane protein with EGF-like and two follistatin-like domains 2 /// transm	2,30	chr4

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Table S5 : Genes downregulated in MPC compared to hES (Fold Change > 2; $\alpha < 0.05$)

Gene Symbol	Entrez Gene	Gene Title	MPC_down	Chromosome Number(Avadis)
37316	92935	methionine-tRNA synthetase 2 (mitochondrial)	2,93	chr2
37865	55964	septin 3	4,36	chr22
38961	23157	septin 6	2,72	chrX
AACS	65985	acetoacetyl-CoA synthetase	2,48	chr12
AAMP	14	angio-associated, migratory cell protein	3,76	chr2
AARS	16	alanyl-tRNA synthetase	2,10	chr16
AARSL	57505	alanyl-tRNA synthetase like	2,64	chr6
AASDH	132949	2-aminoadipic 6-semialdehyde dehydrogenase	2,21	chr4
AASS	10157	aminoadipate-semialdehyde synthase	49,82	chr7
AATF	26574	apoptosis antagonizing transcription factor	2,30	chr17
ABCB6	10058	ATP-binding cassette, sub-family B (MDR/TAP), member 6	2,71	chr2
ABCB7	22	ATP-binding cassette, sub-family B (MDR/TAP), member 7	4,48	chrX
ABCC5	10057	ATP-binding cassette, sub-family C (CFTR/MRP), member 5	2,18	chr3
ABCD4	5826	ATP-binding cassette, sub-family D (ALD), member 4	3,01	chr14
ABCF1	23	ATP-binding cassette, sub-family F (GCN20), member 1 /// ATP-binding cassette	2,00	chr6
ABCG2	9429	ATP-binding cassette, sub-family G (WHITE), member 2	2,81	chr4
ABHD11	83451	abhydrolase domain containing 11	2,24	chr7
ABHD5	51099	abhydrolase domain containing 5	2,25	chr3
ABHD9	79852	abhydrolase domain containing 9	8,16	chr19
ABLIM1	3983	actin binding LIM protein 1	2,41	chr10
ABT1	29777	activator of basal transcription 1	2,77	chr6
ACAA2	10449	acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme A thio	3,35	chr18
ACACA	31	acetyl-Coenzyme A carboxylase alpha	2,97	chr17
ACACB	32	acetyl-Coenzyme A carboxylase beta	5,86	chr12
ACAD8	27034	acyl-Coenzyme A dehydrogenase family, member 8	3,81	chr11
ACADSB	36	acyl-Coenzyme A dehydrogenase, short/branched chain	2,51	chr10
ACAT2	39	acetyl-Coenzyme A acetyltransferase 2 (acetoacetyl Coenzyme A thiolase)	5,22	chr6
ACIN1	22985	Apoptotic chromatin condensation inducer 1	3,16	chr14
ACOT7	11332	acyl-CoA thioesterase 7	2,12	chr1
ACOT8	10005	Acyl-CoA thioesterase 8	2,29	chr20
ACP1	52	acid phosphatase 1, soluble	2,44	chr2
ACP6	51205	Acid phosphatase 6, lysophosphatidic	2,60	chr1
ACPL2	92370	acid phosphatase-like 2	3,91	chr3
ACTA1	58	actin, alpha 1, skeletal muscle	5,03	chr1
ACTN3	89	actinin, alpha 3	4,03	chr11
ACTR3B	57180	ARP3 actin-related protein 3 homolog B (yeast)	4,29	chr7
ACTR5	79913	ARP5 actin-related protein 5 homolog (yeast)	4,14	chr20
ACVR2B	93	activin A receptor, type IIB	19,71	chr3
ACY1	95	aminoacylase 1	2,85	chr3
ACYP1	97	acylphosphatase 1, erythrocyte (common) type	2,22	chr14
AD031	83935	AD031 protein	2,20	chr11
ADAMTS19	171019	ADAM metallopeptidase with thrombospondin type 1 motif, 19	6,19	chr5
ADAMTS8	11095	ADAM metallopeptidase with thrombospondin type 1 motif, 8	9,00	chr11
ADCK1	57143	aarF domain containing kinase 1	2,21	chr14
ADCY1	107	adenylate cyclase 1 (brain)	6,53	chr7
ADCY2	108	adenylate cyclase 2 (brain)	45,84	chr5
ADCY7	113	adenylate cyclase 7	2,39	chr16
ADD2	119	adducin 2 (beta)	35,17	chr2
ADFP	123	adipose differentiation-related protein	2,01	chr9
ADNP	23394	Activity-dependent neuroprotector	6,89	chr20
ADPN	80339	adiponutrin	2,91	chr22
ADRA2A	150	adrenergic, alpha-2A-, receptor /// adrenergic, alpha-2A-, receptor	3,18	chr10
ADRBK2	157	adrenergic, beta, receptor kinase 2	17,21	chr22
ADSL	158	adenylosuccinate lyase	3,47	chr22
AFF1	4299	AF4/FMR2 family, member 1	3,80	chr4
AFG3L1	172	AFG3 ATPase family gene 3-like 1 (yeast)	3,66	chr16
AFG3L2	10939	AFG3 ATPase family gene 3-like 2 (yeast)	4,72	chr18
AGPAT4	56895	1-acylglycerol-3-phosphate O-acyltransferase 4 (lysophosphatidic acid acyltrans	2,37	chr6
AGPAT5	55326	1-acylglycerol-3-phosphate O-acyltransferase 5 (lysophosphatidic acid acyltrans	5,10	chr8
AGTPBP1	23287	ATP/GTP binding protein 1	5,09	chr9
AGTRAP	57085	angiotensin II receptor-associated protein	3,41	chr1
AHCY	191	S-adenosylhomocysteine hydrolase	3,12	chr20
AHSA1	10598	AHA1, activator of heat shock 90kDa protein ATPase homolog 1 (yeast)	2,20	chr14
AIM1	202	absent in melanoma 1	7,08	chr6
AIM1L	55057	absent in melanoma 1-like	4,73	chr1
AK2	204	adenylate kinase 2	2,17	chr1

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AK3L1	205	adenylate kinase 3-like 1	3,59	chr1
AK3L1	205 /// 387851	adenylate kinase 3-like 1 /// adenylate kinase 3-like 2	2,67	chr1
AKAP1	8165	A kinase (PRKA) anchor protein 1	10,58	chr17
AKAP10	11216	A kinase (PRKA) anchor protein 10	3,59	chr17
AKAP13	11214	A kinase (PRKA) anchor protein 13	2,67	chr15
AKAP7	9465	A kinase (PRKA) anchor protein 7	2,57	chr6
AKAP8	10270	A kinase (PRKA) anchor protein 8	2,31	chr19
AKR1A1	10327	aldo-keto reductase family 1, member A1 (aldehyde reductase)	2,02	chr1
ALDH16A1	126133	aldehyde dehydrogenase 16 family, member A1	3,46	chr19
ALDH3A2	224	aldehyde dehydrogenase 3 family, member A2	6,74	chr17
ALDH6A1	4329	Aldehyde dehydrogenase 6 family, member A1	2,17	chr14
ALDH7A1	501	aldehyde dehydrogenase 7 family, member A1	4,60	chr5
ALDOC	230	aldolase C, fructose-bisphosphate	2,52	chr17
ALG6	29929	asparagine-linked glycosylation 6 homolog (yeast, alpha-1,3-glucosyltransferase	4,69	chr1
ALG8	79053	asparagine-linked glycosylation 8 homolog (yeast, alpha-1,3-glucosyltransferase	2,38	chr11
ALMS1	7840	Alstrom syndrome 1	9,58	chr2
ALPL	249	alkaline phosphatase, liver/bone/kidney	2,26	chr1
ALS2CR13	150864	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 13	7,12	chr2
ALS2CR19	117583	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 19	2,76	chr1
AMD1	262	adenosylmethionine decarboxylase 1	2,79	chr6
AMPH	273	amphiphysin (Stiff-Man syndrome with breast cancer 128kDa autoantigen)	2,91	chr7
AMT	275	aminomethyltransferase (glycine cleavage system protein T)	9,65	chr3
ANAPC1	64682	Anaphase promoting complex subunit 1	5,21	chr2
ANAPC10	10393	anaphase promoting complex subunit 10	2,08	chr4
ANAPC4	29945	anaphase promoting complex subunit 4	2,88	chr4
ANAPC7	51434	anaphase promoting complex subunit 7	2,60	chr12
ANGEL2	90806	Angel homolog 2 (Drosophila)	27,73	chr1
ANK3	288	ankyrin 3, node of Ranvier (ankyrin G)	6,60	chr10
ANKHD1	54882	ankyrin repeat and KH domain containing 1	9,32	chr5
ANKHD1	404734 /// 54882	ankyrin repeat and KH domain containing 1 /// MASK-4E-BP3 alternate reading f	2,16	chr5
ANKRD10	55608	Ankyrin repeat domain 10	9,14	chr13
ANKRD16	54522	ankyrin repeat domain 16	2,90	chr10
ANKRD27	84079	ankyrin repeat domain 27 (VPS9 domain)	2,91	chr19
ANKRD32	84250	ankyrin repeat domain 32	4,56	chr5
ANKRD35	148741	ankyrin repeat domain 35	7,30	chr1
ANKRD39	51239	ankyrin repeat domain 39	2,19	chr2
ANKRD41	126549	ankyrin repeat domain 41	2,47	chr19
ANKRD5	63926	ankyrin repeat domain 5	5,66	chr20
ANKRD9	122416	ankyrin repeat domain 9	2,29	chr14
ANKS1	23294	ankyrin repeat and sterile alpha motif domain containing 1	2,50	chr6
ANP32A	8125	Acidic (leucine-rich) nuclear phosphoprotein 32 family, member A	3,43	chr15
ANP32E	81611	Acidic (leucine-rich) nuclear phosphoprotein 32 family, member E	3,97	chr1
AOF2	23028	amine oxidase (flavin containing) domain 2	4,12	chr1
AP1G2	8906	adaptor-related protein complex 1, gamma 2 subunit	3,44	chr3
AP1M2	10053	adaptor-related protein complex 1, mu 2 subunit	16,15	chr19
AP1S2	8905	Adaptor-related protein complex 1, sigma 2 subunit	50,35	chrX
AP4S1	11154	adaptor-related protein complex 4, sigma 1 subunit	2,61	chr6
APEH	327	N-acylaminoacyl-peptide hydrolase	3,42	chr3
APEX1	328	APEX nuclease (multifunctional DNA repair enzyme) 1	2,48	chr14
API5	8539	Apoptosis inhibitor 5	2,49	chr11
APITD1	378708	apoptosis-inducing, TAF9-like domain 1	2,74	chr1
APOC1	341	apolipoprotein C-I	14,76	chr19
APOE	348	apolipoprotein E	40,37	chr19
APPBP1	8883	amyloid beta precursor protein binding protein 1	2,61	chr16
APRIN	23047	Androgen-induced proliferation inhibitor	2,48	chr13
APRT	353	adenine phosphoribosyltransferase	3,77	chr16
APTX	54840	aprataxin	2,21	chr9
AQR	9716	aquarius homolog (mouse)	3,51	chr15
ARFGEF1	10565	ADP-ribosylation factor guanine nucleotide-exchange factor 1(brefeldin A-inhibite	3,49	chr8
ARG2	384	arginase, type II	8,83	chr14
ARG99	83857	ARG99 protein /// ARG99 protein	2,95	chr12
ARHGAP11A	9824	Rho GTPase activating protein 11A	2,61	chr15
ARHGAP12	94134	Rho GTPase activating protein 12	2,49	chr10
ARHGAP19	84986	Rho GTPase activating protein 19	7,54	chr10
ARHGAP26	23092	Rho GTPase activating protein 26	2,93	chr5
ARHGAP28	79822	Rho GTPase activating protein 28	5,70	chr18
ARHGAP5	394	Rho GTPase activating protein 5	2,54	chr14

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ARHGAP8 ///	23779 /// 553158	Rho GTPase activating protein 8 /// PRR5-ARHGAP8 fusion	27,11	chr22
ARHGEF10	9639	Rho guanine nucleotide exchange factor (GEF) 10	5,62	chr8
ARHGEF19	128272	Rho guanine nucleotide exchange factor (GEF) 19	3,40	chr1
ARHGEF5	7984	Rho guanine nucleotide exchange factor (GEF) 5	5,24	chr7
ARHGEF7	8874	Rho guanine nucleotide exchange factor (GEF) 7	3,83	chr13
ARHGEF9	23229	Cdc42 guanine nucleotide exchange factor (GEF) 9	7,87	chrX
ARID1A	8289	AT rich interactive domain 1A (SWI- like)	2,50	chr1
ARID1B	57492	AT rich interactive domain 1B (SWI1-like)	3,16	chr6
ARID2	196528	AT rich interactive domain 2 (ARID, RFX-like)	3,78	chr12
ARID3A	1820	AT rich interactive domain 3A (BRIGHT- like)	2,87	chr19
ARID3B	10620	AT rich interactive domain 3B (BRIGHT- like)	30,08	chr1
ARIH2	10425	ariadne homolog 2 (Drosophila)	3,32	chr3
ARL2	402	ADP-ribosylation factor-like 2	2,36	chr11
ARL4	10124	ADP-ribosylation factor-like 4	2,85	chr6
ARL6IP	23204	ADP-ribosylation factor-like 6 interacting protein	2,93	chr16
ARL6IP2	64225	ADP-ribosylation factor-like 6 interacting protein 2	2,72	chr2
ARL6IP6	151188	ADP-ribosylation-like factor 6 interacting protein 6	2,48	chr2
ARL8	221079	ADP-ribosylation factor-like 8	2,48	chr10
ARMC6	93436	armadillo repeat containing 6	2,23	chr19
ARMC8	25852	armadillo repeat containing 8	2,79	chr3
ARS2	51593	arsenate resistance protein ARS2	3,20	chr7
ASCIZ	23300	ATM/ATR-Substrate Chk2-Interacting Zn2+-finger protein	2,15	chr16
ASF1A	25842	ASF1 anti-silencing function 1 homolog A (S. cerevisiae)	2,16	chr6
ASK	10926	activator of S phase kinase	6,58	chr7
ASMTL	8623	acetylserotonin O-methyltransferase-like	2,01	chrY
ASPM	259266	asp (abnormal spindle)-like, microcephaly associated (Drosophila)	5,77	chr1
ASRGL1	80150	asparaginase like 1	9,62	chr11
ASTN2	23245	astrotactin 2	2,12	chr9
ASXL2	55252	additional sex combs like 2 (Drosophila)	2,31	chr2
ATAD2	29028	ATPase family, AAA domain containing 2	2,43	chr8
ATAD3B	83858	ATPase family, AAA domain containing 3B	2,08	chr1_random
ATCAY	85300	ataxia, cerebellar, Cayman type (caytaxin)	2,13	chr19
ATF7IP2	80063	activating transcription factor 7 interacting protein 2	3,56	chr16
ATG10	83734	ATG10 autophagy related 10 homolog (S. cerevisiae)	2,57	chr5
ATG4D	84971	ATG4 autophagy related 4 homolog D (S. cerevisiae)	2,45	chr19
ATIC	471	5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase/IMP cyclohyd	4,19	chr2
ATP11A	23250	ATPase, Class VI, type 11A	2,66	chr13
ATP1A2	477	ATPase, Na+/K+ transporting, alpha 2 (+) polypeptide	8,72	chr1
ATP1B3	483	ATPase, Na+/K+ transporting, beta 3 polypeptide	2,26	chr3
ATP2A1	487	ATPase, Ca++ transporting, cardiac muscle, fast twitch 1	3,76	chr16
ATP5G1	516	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9),	2,54	chr17
ATP5G2	517	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9),	2,44	chr1
ATP5G3	518	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9)	3,20	chr2
ATP5H	10476	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit d	2,20	chr9
ATP5I	521	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit e	2,22	chr4
ATP5O	539	ATP synthase, H+ transporting, mitochondrial F1 complex, O subunit (oligomycin	2,25	chr21
ATP5S	27109	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit s (factor B)	2,45	chr14
ATP6AP1	537	ATPase, H+ transporting, lysosomal accessory protein 1	3,59	chr16
ATP6V0A2	23545	ATPase, H+ transporting, lysosomal V0 subunit a isoform 2	2,26	chr12
ATP6V0E2L	155066	ATPase, H+ transporting V0 subunit E isoform 2-like (rat)	2,07	chr7
ATP8A1	10396	ATPase, aminophospholipid transporter (APLT), Class I, type 8A, member 1	8,09	chr4
ATPAF1	64756	ATP synthase mitochondrial F1 complex assembly factor 1	3,00	chr1
ATPBD1B	54707	ATP binding domain 1 family, member B	2,16	chr1
ATPBD1C	51184	ATP binding domain 1 family, member C	2,17	chr12
ATRNL1	26033	attractin-like 1	3,58	chr10
ATRX	546	Alpha thalassemia/mental retardation syndrome X-linked (RAD54 homolog, S. c	6,07	chrX
ATXN3	4287	ataxin 3	3,01	chr14
ATXN7L1	57485	ataxin 7-like 1	2,43	chr7
AUH	549	AU RNA binding protein/enoyl-Coenzyme A hydratase	4,13	chr9
AURKAIP1	54998	aurora kinase A interacting protein 1	2,90	chr1_random
AURKB	9212	aurora kinase B	7,83	chr17
AUTS2	26053	autism susceptibility candidate 2	7,81	chr7
AXIN2	8313	axin 2 (conductin, axil)	18,50	chr17
AZI1	22994	5-azacytidine induced 1	2,06	chr17
AZIN1	51582	Antizyme inhibitor 1	3,10	chr8
B3GAT1	27087	beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P)	3,33	chr11
B3GNT1	10678	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 1	2,69	chr2

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B3GNT7	93010	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 7	**11,65**	chr2
B4GALT5	9334	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 5	**5,41**	chr20
B4GALT6	9331	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 6	**2,35**	chr18
BACE1	23621	beta-site APP-cleaving enzyme 1	**2,00**	chr11
BAG1	573	BCL2-associated athanogene /// BCL2-associated athanogene	**3,13**	chr9
BAHD1	22893	bromo adjacent homology domain containing 1	**2,36**	chr15
BAIAP2L1	55971	BAI1-associated protein 2-like 1	**2,78**	chr7
BANF1	8815	barrier to autointegration factor 1	**2,18**	chr11
BANP	54971	BTG3 associated nuclear protein	**2,28**	chr16
BARD1	580	BRCA1 associated RING domain 1	**6,00**	chr2
BAT2D1	23215	BAT2 domain containing 1	**3,61**	chr1
BAT3	7917	HLA-B associated transcript 3	**2,33**	chr6
BAT4	7918	HLA-B associated transcript 4	**2,78**	chr6
BAX	581	BCL2-associated X protein	**2,18**	chr19
BC036928	386758	hypothetical protein BC036928	**2,68**	(vide)
BCCIP	56647	BRCA2 and CDKN1A interacting protein	**2,95**	chr10
BCDIN3	56257	bin3, bicoid-interacting 3, homolog (Drosophila)	**2,60**	chr7
BCKDHB	594	branched chain keto acid dehydrogenase E1, beta polypeptide (maple syrup urin	**3,86**	chr6
BCL11A	53335	B-cell CLL/lymphoma 11A (zinc finger protein)	**6,43**	chr2
BCL11B	64919	B-cell CLL/lymphoma 11B (zinc finger protein)	**5,29**	chr14
BCL2L11	10018	BCL2-like 11 (apoptosis facilitator)	**9,23**	chr2
BCL2L12	83596	BCL2-like 12 (proline rich)	**5,13**	chr19
BCOR	54880	BCL6 co-repressor	**8,07**	chrX
BCR	613	breakpoint cluster region	**2,97**	chr22
BDH	622	3-hydroxybutyrate dehydrogenase (heart, mitochondrial) /// 3-hydroxybutyrate de	**2,33**	chr3
BDP1	55814	B double prime 1, subunit of RNA polymerase III transcription initiation factor IIIB	**2,47**	chr5
BEX1	55859	brain expressed, X-linked 1	**3,78**	chrX
BEX2	84707	brain expressed X-linked 2 /// brain expressed X-linked 2	**16,92**	chrX
BHLHB9	80823	basic helix-loop-helix domain containing, class B, 9	**4,92**	chrX
BICD1	636	bicaudal D homolog 1 (Drosophila)	**6,67**	chr12
BIRC5	332	baculoviral IAP repeat-containing 5 (survivin)	**7,65**	chr17
BIRC6	57448	Splicing factor, arginine/serine-rich 12	**2,37**	chr2
BLM	641	Bloom syndrome	**13,61**	chr15
BLMH	642	bleomycin hydrolase	**3,27**	chr17
BM039	55839	uncharacterized bone marrow protein BM039	**6,19**	chr16
BMP2K	55589	BMP2 inducible kinase	**2,08**	chr4
BMP7	655	Bone morphogenetic protein 7 (osteogenic protein 1)	**4,44**	chr20
BMPR1A	657	bone morphogenetic protein receptor, type IA	**3,07**	chr10
BMS1L	9790	BMS1-like, ribosome assembly protein (yeast)	**2,81**	chr10
BNC2	54796	Basonuclin 2	**3,38**	chr9
BOLA1	51027	bolA-like 1 (E. coli)	**2,19**	chr1
BOLA2	552900	bolA-like 2 (E. coli)	**2,82**	chr16
BOLA3	388962	bolA-like 3 (E. coli)	**2,14**	chr2
BOP1	23246	block of proliferation 1	**2,36**	chr8
BRAF	673	v-raf murine sarcoma viral oncogene homolog B1	**2,24**	chr7
BRCA1	672	breast cancer 1, early onset	**6,06**	chr17
BRCA2	675	breast cancer 2, early onset	**2,96**	chr13
BRD3	8019	Bromodomain containing 3	**2,72**	chr9
BRD4	23476	Bromodomain containing 4	**2,19**	chr19
BRD7	29117	bromodomain containing 7	**4,60**	chr3
BRD8	10902	bromodomain containing 8	**2,69**	chr5
BRRN1	23397	barren homolog (Drosophila)	**6,89**	chr2
BRUNOL5	60680	bruno-like 5, RNA binding protein (Drosophila)	**6,41**	chr19
BRWD1	54014	bromodomain and WD repeat domain containing 1	**4,38**	chr21
BRWD3	254065	bromodomain and WD repeat domain containing 3	**4,52**	chrX
BSCL2	221092 /// 26580	Bernardinelli-Seip congenital lipodystrophy 2 (seipin) /// heterogeneous nuclear r	**4,85**	chr11
BSPRY	54836	B-box and SPRY domain containing	**2,63**	chr9
BST2	684	bone marrow stromal cell antigen 2	**13,21**	chr19
BTBD15	29068	BTB (POZ) domain containing 15	**7,74**	chr11
BTBD3	22903	BTB (POZ) domain containing 3	**2,36**	chr20
BTBD4	140685	BTB (POZ) domain containing 4	**2,62**	chr20
BTBD7	55727	BTB (POZ) domain containing 7	**2,75**	chr14
BTF3L4	91408	Basic transcription factor 3-like 4	**2,27**	chr1
BUB1	699	BUB1 budding uninhibited by benzimidazoles 1 homolog (yeast)	**18,20**	chr2
BUB1B	701	BUB1 budding uninhibited by benzimidazoles 1 homolog beta (yeast)	**15,91**	chr15
BUB3	9184	BUB3 budding uninhibited by benzimidazoles 3 homolog (yeast)	**2,87**	chr10
BXDC1	84154	brix domain containing 1	**2,29**	chr6

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BXDC2	55299	brix domain containing 2	2,11	chr5
BYSL	705	bystin-like	2,42	chr6
C10orf119	79892	chromosome 10 open reading frame 119	2,11	chr10
C10orf13	143282	chromosome 10 open reading frame 13	4,13	chr10
C10orf137	26098	chromosome 10 open reading frame 137	2,33	chr10
C10orf22	84890	chromosome 10 open reading frame 22	3,13	chr10
C10orf35	219738	chromosome 10 open reading frame 35	5,21	chr10
C10orf47	254427	chromosome 10 open reading frame 47	2,87	chr10
C10orf59	55328	chromosome 10 open reading frame 59	3,31	chr10
C10orf7	8872	chromosome 10 open reading frame 7	2,17	chr10
C10orf77	79847	chromosome 10 open reading frame 77	2,13	chr10
C10orf78	119392	chromosome 10 open reading frame 78	2,70	chr10
C10orf82	143379	chromosome 10 open reading frame 82	2,09	chr10
C10orf86	54780	chromosome 10 open reading frame 86	6,19	chr10
C10orf95	54808 /// 79946	Chromosome 10 open reading frame 95 /// Dymeclin	5,60	chr10
C11orf1	64776	chromosome 11 open reading frame 1	2,86	chr11
C11orf2	738	chromosome 11 open reading frame2	2,16	chr11
C11orf31	280636	chromosome 11 open reading frame 31	3,06	chr11
C11orf32	442871	chromosome 11 open reading frame 32	66,43	chr11
C12orf10	60314	chromosome 12 open reading frame 10	2,78	chr12
C13orf10	64062	Chromosome 13 open reading frame 10	3,75	chr13
C13orf23	80209	chromosome 13 open reading frame 23	4,17	chr13
C13orf25	407975	chromosome 13 open reading frame 25	4,22	chr13
C13orf3	221150	chromosome 13 open reading frame 3	11,94	chr13
C13orf7	79596	chromosome 13 open reading frame 7	2,39	chr13
C14orf1	11161	chromosome 14 open reading frame 1	2,15	chr14
C14orf104	55172	chromosome 14 open reading frame 104	4,22	chr14
C14orf106	55320	chromosome 14 open reading frame 106	8,32	chr14
C14orf109	26175	chromosome 14 open reading frame 109	2,49	chr14
C14orf115	55237	chromosome 14 open reading frame 115	20,80	chr14
C14orf120	25983	chromosome 14 open reading frame 120	3,13	chr14
C14orf122	51016	chromosome 14 open reading frame 122	3,45	chr14
C14orf130	55148	chromosome 14 open reading frame 130	2,14	chr14
C14orf135	64430	Chromosome 14 open reading frame 135	2,07	(vide)
C14orf143	90141	chromosome 14 open reading frame 143	2,47	chr14
C14orf145	145508	chromosome 14 open reading frame 145	2,77	chr14
C14orf150	112840	chromosome 14 open reading frame 150	3,53	chr14
C14orf156	81892	chromosome 14 open reading frame 156 /// chromosome 14 open reading fram	3,56	chr14
C14orf159	80017	chromosome 14 open reading frame 159	3,11	chr14
C14orf169	79697	chromosome 14 open reading frame 169	3,44	chr14
C14orf94	54930	chromosome 14 open reading frame 94	7,54	chr14
C15orf20	80119	chromosome 15 open reading frame 20	12,30	chr15
C15orf23	90417	chromosome 15 open reading frame 23	2,65	chr15
C16orf33	79622	chromosome 16 open reading frame 33	3,19	chr16
C16orf34	90861	chromosome 16 open reading frame 34	2,34	chr16
C16orf5	29965	chromosome 16 open reading frame 5	2,94	chr16
C16orf51	25880	chromosome 16 open reading frame 51	2,08	chr16
C16orf53	79447	chromosome 16 open reading frame 53	5,47	chr16
C17orf25	51031	chromosome 17 open reading frame 25	2,09	chr17
C17orf32	147007	chromosome 17 open reading frame 32	2,04	chr17
C17orf39	79018	chromosome 17 open reading frame 39	2,03	chr17
C17orf41	79915	chromosome 17 open reading frame 41	3,37	chr17
C17orf63	55731	Chromosome 17 open reading frame 63	3,39	chr17
C18orf18	147525	chromosome 18 open reading frame 18	2,31	chr18
C18orf19	125228	chromosome 18 open reading frame 19	2,19	chr18
C18orf22	79863	chromosome 18 open reading frame 22	2,68	chr18
C18orf37	125476	chromosome 18 open reading frame 37	3,07	chr18
C18orf54	162681	Chromosome 18 open reading frame 54	6,97	chr18
C18orf55	29090	chromosome 18 open reading frame 55	2,28	chr18
C18orf9	79959	chromosome 18 open reading frame 9	3,29	chr18
C19orf32	92840	chromosome 19 open reading frame 32	2,03	chr19
C19orf33	64073	chromosome 19 open reading frame 33	3,02	chr19
C19orf7	23211	chromosome 19 open reading frame 7	2,31	chr19
C1GALT1	56913	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransfera	2,17	chr7
C1orf104	284618	Chromosome 1 open reading frame 104	3,02	chr1
C1orf106	55765	chromosome 1 open reading frame 106	23,01	chr1
C1orf108	79647	chromosome 1 open reading frame 108	4,08	chr1

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C1orf112	55732	Chromosome 1 open reading frame 112	**4,43**	chr1
C1orf114	57821	chromosome 1 open reading frame 114	**3,44**	chr1
C1orf115	79762	chromosome 1 open reading frame 115	**2,67**	chr1
C1orf121	51029	chromosome 1 open reading frame 121	**7,68**	chr1
C1orf128	57095	chromosome 1 open reading frame 128	**2,51**	chr1
C1orf135	79000	chromosome 1 open reading frame 135	**7,70**	chr1
C1orf156	92342	chromosome 1 open reading frame 156	**3,28**	chr1
C1orf163	65260	chromosome 1 open reading frame 163	**4,70**	chr1
C1orf164	55182	chromosome 1 open reading frame 164	**2,73**	chr1
C1orf165	79656	chromosome 1 open reading frame 165	**3,70**	chr1
C1orf171	127253	chromosome 1 open reading frame 171	**2,60**	chr1
C1orf172	126695	chromosome 1 open reading frame 172	**2,27**	chr1
C1orf187	374946	chromosome 1 open reading frame 187	**9,38**	chr1
C1orf192	257177	Chromosome 1 open reading frame 192	**2,06**	chr1
C1orf31	388753	chromosome 1 open reading frame 31	**2,38**	chr1
C1orf37	92703	chromosome 1 open reading frame 37	**3,17**	chr1
C1orf43	25912	chromosome 1 open reading frame 43	**7,95**	chr1
C1orf48	25936	chromosome 1 open reading frame 48	**2,29**	chr1
C1orf57	84284	chromosome 1 open reading frame 57	**3,85**	chr1
C1orf59	113802	chromosome 1 open reading frame 59	**5,01**	chr1
C1orf67	200095	chromosome 1 open reading frame 67	**2,50**	chr1
C1orf69	200205	chromosome 1 open reading frame 69	**2,80**	chr1
C1orf77	26097	chromosome 1 open reading frame 77	**4,26**	chr1
C1orf79	85028	chromosome 1 open reading frame 79	**3,21**	chr1
C1orf93	127281	chromosome 1 open reading frame 93	**2,11**	chr1
C1orf97	84791	chromosome 1 open reading frame 97 /// chromosome 1 open reading frame 97	**5,22**	chr1
C1QBP	708	Complement component 1, q subcomponent binding protein	**5,06**	chr17
C20orf11	54994	chromosome 20 open reading frame 11	**3,03**	chr20
C20orf118	140711	Chromosome 20 open reading frame 118	**6,38**	chr20
C20orf119	80336	Similar to embryonic poly(A) binding protein	**5,64**	chr20
C20orf12	55184	Chromosome 20 open reading frame 12	**3,39**	chr13
C20orf129	81610	chromosome 20 open reading frame 129	**10,15**	chr20
C20orf14	24148	chromosome 20 open reading frame 14	**2,12**	chr20
C20orf160	140706	chromosome 20 open reading frame 160	**4,36**	chr20
C20orf172	79980	chromosome 20 open reading frame 172	**3,65**	chr20
C20orf177	63939	chromosome 20 open reading frame 177	**2,41**	chr20
C20orf19	55857	chromosome 20 open reading frame 19	**4,40**	chr20
C20orf35	55861	chromosome 20 open reading frame 35	**5,36**	chr20
C20orf39	79953	chromosome 20 open reading frame 39	**2,12**	chr20
C20orf42	55612	chromosome 20 open reading frame 42	**8,00**	chr20
C20orf6	51575	chromosome 20 open reading frame 6	**3,54**	chr20
C20orf7	79133	chromosome 20 open reading frame 7	**3,09**	chr20
C20orf72	92667	chromosome 20 open reading frame 72	**6,41**	chr20
C20orf74	57186	chromosome 20 open reading frame 74	**4,13**	chr20
C20orf94	128710	chromosome 20 open reading frame 94	**2,73**	chr20
C21orf18	54093	chromosome 21 open reading frame 18	**4,26**	chr21
C21orf33	8209	chromosome 21 open reading frame 33	**2,05**	chr21
C21orf45	54069	chromosome 21 open reading frame 45	**12,84**	chr21
C21orf57	54059	Chromosome 21 open reading frame 57	**3,48**	(vide)
C21orf58	54058	chromosome 21 open reading frame 58	**2,02**	chr21
C21orf59	56683	chromosome 21 open reading frame 59	**5,56**	chr21
C21orf66	94104	Chromosome 21 open reading frame 66	**3,56**	chr21
C22orf16	400916	chromosome 22 open reading frame 16	**3,74**	chr22
C22orf18	79019	chromosome 22 open reading frame 18	**6,28**	chr22
C22orf3	25807	chromosome 22 open reading frame 3	**3,41**	chr22
C2F	10436	C2f protein	**3,57**	chr12
C2orf31	81561	chromosome 2 open reading frame 31 /// chromosome 2 open reading frame 31	**249,90**	chr2
C2orf34	79823	chromosome 2 open reading frame 34	**2,32**	chr2
C3F	10162	putative protein similar to nessy (Drosophila)	**2,79**	chr12
C3orf14	57415	chromosome 3 open reading frame 14	**2,85**	chr3
C3orf17	25871	Chromosome 3 open reading frame 17	**2,04**	chr3
C4orf14	84273	chromosome 4 open reading frame 14	**2,49**	chr4
C4orf15	79441	chromosome 4 open reading frame 15	**2,18**	chr4
C6orf108	10591	chromosome 6 open reading frame 108	**2,61**	chr6
C6orf111	25957	chromosome 6 open reading frame 111	**3,93**	chr6
C6orf115	58527	chromosome 6 open reading frame 115	**3,75**	chr6
C6orf117	112609	chromosome 6 open reading frame 117	**13,54**	chr6

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C6orf130	221443	chromosome 6 open reading frame 130	4,71	chr6
C6orf136	221545	chromosome 6 open reading frame 136	2,49	chr6
C6orf139	55166	chromosome 6 open reading frame 139	2,48	chr6
C6orf149	57128	chromosome 6 open reading frame 149	2,52	chr6
C6orf157	90025	chromosome 6 open reading frame 157	3,55	chr6
C6orf166	55122	Chromosome 6 open reading frame 166	2,31	chr6
C6orf168	84553	chromosome 6 open reading frame 168	3,31	chr6
C6orf173	387103	chromosome 6 open reading frame 173	5,96	chr6
C6orf189	221303	chromosome 6 open reading frame 189	2,26	chr6
C6orf192	116843	chromosome 6 open reading frame 192	7,62	chr6
C6orf210	57107	chromosome 6 open reading frame 210	2,06	chr6
C6orf211	79624	chromosome 6 open reading frame 211	2,17	chr6
C6orf49	29964	Chromosome 6 open reading frame 49	5,50	chr6
C6orf60	79632	chromosome 6 open reading frame 60	5,09	chr6
C6orf66	29078	chromosome 6 open reading frame 66	3,13	chr6
C6orf75	60487	chromosome 6 open reading frame 75	2,13	chr6
C6orf84	22832	chromosome 6 open reading frame 84	2,02	chr6
C6orf85	63027	chromosome 6 open reading frame 85	8,52	chr6
C6orf93	84946	chromosome 6 open reading frame 93	2,84	chr6
C7orf16	10842	chromosome 7 open reading frame 16	2,27	chr7
C7orf20	51608	chromosome 7 open reading frame 20	3,90	chr7
C7orf24	79017	chromosome 7 open reading frame 24	3,93	chr7
C7orf27	221927	chromosome 7 open reading frame 27	2,49	chr7
C7orf29	113763	chromosome 7 open reading frame 29	2,59	chr7
C7orf30	115416	chromosome 7 open reading frame 30	3,05	chr7
C7orf36	57002	chromosome 7 open reading frame 36	2,27	chr7
C8orf38	137682	chromosome 8 open reading frame 38	3,39	chr8
C8orf40	114926	chromosome 8 open reading frame 40	2,20	chr8
C8orf41	80185	chromosome 8 open reading frame 41	2,49	chr8
C8orf42	157695	Chromosome 8 open reading frame 42	8,19	chr8
C8orf52	55656	chromosome 8 open reading frame 52	2,42	chr8
C9orf100	84904	chromosome 9 open reading frame 100	2,01	chr9
C9orf112	92715	chromosome 9 open reading frame 112	2,30	chr9
C9orf114	51490	chromosome 9 open reading frame 114	3,41	chr9
C9orf123	90871	chromosome 9 open reading frame 123	3,74	chr9
C9orf125	84302	chromosome 9 open reading frame 125 /// chromosome 9 open reading frame 1	2,01	chr9
C9orf126	286205	chromosome 9 open reading frame 126	2,53	chr9
C9orf140	89958	chromosome 9 open reading frame 140	6,65	chr9
C9orf42	116224	chromosome 9 open reading frame 42	2,23	chr9
C9orf45	81571	chromosome 9 open reading frame 45	11,84	chr9
C9orf58	83543	chromosome 9 open reading frame 58	26,18	chr9
C9orf64	84267	chromosome 9 open reading frame 64	6,54	chr9
C9orf72	203228	chromosome 9 open reading frame 72	3,91	chr9
C9orf76	80010	chromosome 9 open reading frame 76	5,34	chr9
C9orf77	51104	chromosome 9 open reading frame 77	2,76	chr9
C9orf80	58493	Chromosome 9 open reading frame 80	2,65	chr9
C9orf81	84131	chromosome 9 open reading frame 81	3,46	chr9
C9orf86	55684	chromosome 9 open reading frame 86	3,03	chr9
CA11	770	carbonic anhydrase XI	4,10	chr19
CA14	23632	carbonic anhydrase XIV	12,91	chr1
CA2	760	carbonic anhydrase II	12,39	chr8
CA5BL	340591	Carbonic anhydrase VB-like	2,40	chrX
CABC1	56997	chaperone, ABC1 activity of bc1 complex like (S. pombe)	5,20	chr1
CABP7	164633	calcium binding protein 7	2,52	chr22
CABYR	26256	calcium binding tyrosine-(Y)-phosphorylation regulated (fibrousheathin 2)	2,11	chr18
CACHD1	57685	cache domain containing 1	11,98	chr1
CACNA1D	776	Calcium channel, voltage-dependent, L type, alpha 1D subunit	2,58	chr3
CACNA2D2	9254	calcium channel, voltage-dependent, alpha 2/delta subunit 2	7,30	chr3
CACYBP	27101	calcyclin binding protein	3,81	chr1
CAD	790	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroor	3,64	chr2
CADPS	8618	Ca2+-dependent secretion activator	4,52	chr3
CADPS2	93664	Ca2+-dependent activator protein for secretion 2	11,67	chr7
CALB1	793	calbindin 1, 28kDa	17,68	chr8
CALCA	796	calcitonin/calcitonin-related polypeptide, alpha	2,42	chr11
CALM3	808	calmodulin 3 (phosphorylase kinase, delta)	3,81	chr19
CALML4	91860	calmodulin-like 4	2,05	chr15
CALN1	83698	Calneuron 1	4,17	chr7

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CAMK2G	818	Calcium/calmodulin-dependent protein kinase (CaM kinase) II gamma	4,18	chr10
CAMKV	79012	CaM kinase-like vesicle-associated	5,11	chr3
CAMTA1	23261	calmodulin binding transcription activator 1	2,05	chr1
CANP	374393	cancer-associated nucleoprotein	3,53	chr11
CARD11	84433	caspase recruitment domain family, member 11	3,96	chr7
CARHSP1	23589	calcium regulated heat stable protein 1, 24kDa	4,08	chr16
CARKL	23729	carbohydrate kinase-like	2,23	chr17
CARM1	10498	coactivator-associated arginine methyltransferase 1	2,25	chr19
CASC3	22794	cancer susceptibility candidate 3	2,91	chr17
CASC5	57082	cancer susceptibility candidate 5	3,74	chr15
CASP3	836	caspase 3, apoptosis-related cysteine peptidase	2,04	chr4
CASP8AP2	9994	CASP8 associated protein 2	2,49	chr6
CASP9	842	caspase 9, apoptosis-related cysteine peptidase	4,78	chr1
CASQ1	844	Calsequestrin 1 (fast-twitch, skeletal muscle)	4,79	chr1
CAST1	26059	CAZ-associated structural protein	3,19	chr3
CBFA2T2	9139	core-binding factor, runt domain, alpha subunit 2; translocated to, 2	2,83	chr20
CBL	867	Cas-Br-M (murine) ecotropic retroviral transforming sequence	2,93	chr11
CBLL1	79872	Cas-Br-M (murine) ecotropic retroviral transforming sequence-like 1	2,18	chr7
CBR1	873	carbonyl reductase 1	3,41	chr21
CBR4	84869	carbonic reductase 4	4,76	chr4
CBS	875	cystathionine-beta-synthase	7,01	chr21
CBX1	10951	chromobox homolog 1 (HP1 beta homolog Drosophila)	2,34	chr17
CBX2	84733	chromobox homolog 2 (Pc class homolog, Drosophila)	17,18	chr17
CBX3	11335	Chromobox homolog 3 (HP1 gamma homolog, Drosophila)	3,04	chr7
CBX5	23468	Chromobox homolog 5 (HP1 alpha homolog, Drosophila)	2,76	chr12
CCAR1	55749	Cell division cycle and apoptosis regulator 1	3,12	chr10
CCBL1	883	cysteine conjugate-beta lyase; cytoplasmic (glutamine transaminase K, kyneure	2,98	chr9
CCDC12	151903	coiled-coil domain containing 12	2,41	chr3
CCDC14	64770	coiled-coil domain containing 14	2,16	chr3
CCDC18	343099	coiled-coil domain containing 18	3,97	chr1
CCDC21	64793	coiled-coil domain containing 21	3,56	chr1
CCDC23	374969	coiled-coil domain containing 23	2,38	chr1
CCDC25	55246	coiled-coil domain containing 25	2,02	chr8
CCDC4	389206	coiled-coil domain containing 4	103,58	chr4
CCDC5	115106	coiled-coil domain containing 5 (spindle associated)	5,49	chr18
CCHCR1	54535	coiled-coil alpha-helical rod protein 1	2,42	chr6
CCNA1	8900	cyclin A1	2,01	chr13
CCNA2	890	cyclin A2	13,97	chr4
CCNB1	891	cyclin B1	6,04	chr5
CCNB1IP1	57820	cyclin B1 interacting protein 1	3,68	chr1
CCNB2	9133	cyclin B2	7,90	chr15
CCNE1	898	cyclin E1	7,20	chr19
CCNF	899	cyclin F	6,53	chr16
CCNJ	54619	cyclin J	3,81	chr10
CCNL1	57018	cyclin L1	2,35	chr3
CCNT2	905	cyclin T2	2,51	chr2
CCT2	10576	chaperonin containing TCP1, subunit 2 (beta)	4,11	chr12
CCT3	7203	chaperonin containing TCP1, subunit 3 (gamma)	2,53	chr1
CCT5	22948	chaperonin containing TCP1, subunit 5 (epsilon)	2,39	chr5
CD200	4345	CD200 antigen	10,93	chr3
CD24	934	CD24 antigen (small cell lung carcinoma cluster 4 antigen)	48,71	chr5
CD2AP	23607	CD2-associated protein	2,58	chr6
CD3EAP	10849	CD3E antigen, epsilon polypeptide associated protein	2,16	chr19
CD9	928	CD9 antigen (p24)	6,23	chr12
CDC14B	8555	CDC14 cell division cycle 14 homolog B (S. cerevisiae)	3,44	chr9
CDC2	983	cell division cycle 2, G1 to S and G2 to M	8,81	chr10
CDC20	991	CDC20 cell division cycle 20 homolog (S. cerevisiae)	13,22	chr1
CDC25A	993	cell division cycle 25A	14,93	chr3
CDC25C	995	cell division cycle 25C	9,86	chr5
CDC26	246184	cell division cycle 26	2,09	chr7
CDC2L5	8621	Cell division cycle 2-like 5 (cholinesterase-related cell division controller)	2,44	chr7
CDC2L6	23097	cell division cycle 2-like 6 (CDK8-like)	2,05	chr6
CDC45L	8318	CDC45 cell division cycle 45-like (S. cerevisiae)	4,29	chr22
CDC6	990	CDC6 cell division cycle 6 homolog (S. cerevisiae)	8,11	chr17
CDC7	8317	CDC7 cell division cycle 7 (S. cerevisiae)	24,79	chr1
CDCA1	83540	cell division cycle associated 1	4,89	chr1
CDCA2	157313	cell division cycle associated 2	6,46	chr8

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CDCA3	83461	cell division cycle associated 3	**3,75**	chr12
CDCA4	55038	cell division cycle associated 4	**2,82**	chr14
CDCA5	113130	cell division cycle associated 5	**10,54**	chr11
CDCA7	83879	cell division cycle associated 7 /// cell division cycle associated 7	**5,84**	chr2
CDCA7L	55536	cell division cycle associated 7-like	**10,10**	chr7
CDCA8	55143	cell division cycle associated 8	**6,49**	chr1
CDH1	999	cadherin 1, type 1, E-cadherin (epithelial)	**422,37**	chr16
CDH3	1001	cadherin 3, type 1, P-cadherin (placental)	**27,30**	chr16
CDK3	1018	cyclin-dependent kinase 3	**2,70**	chr17
CDK5R1	8851	cyclin-dependent kinase 5, regulatory subunit 1 (p35)	**4,05**	chr17
CDK5RAP1	51654	CDK5 regulatory subunit associated protein 1	**3,53**	chr20
CDK5RAP2	55755	CDK5 regulatory subunit associated protein 2	**2,10**	chr9
CDK6	1021	cyclin-dependent kinase 6	**2,03**	chr7
CDKN1C	1028	Cyclin-dependent kinase inhibitor 1C (p57, Kip2)	**2,83**	chr11
CDKN3	1033	cyclin-dependent kinase inhibitor 3 (CDK2-associated dual specificity phosphata	**6,24**	chr14
CDO1	1036	cysteine dioxygenase, type I	**7,08**	chr5
CDON	50937	Cdon homolog (mouse)	**6,95**	chr11
CDS1	1040	CDP-diacylglycerol synthase (phosphatidate cytidylyltransferase) 1	**11,28**	chr4
CDS2	8760	CDP-diacylglycerol synthase (phosphatidate cytidylyltransferase) 2	**5,30**	chr20
CDT1	81620	DNA replication factor	**7,21**	chr16
CDYL	9425	chromodomain protein, Y-like	**3,06**	chr6
CEBPZ	10153	CCAAT/enhancer binding protein zeta	**5,61**	chr2
CECR1	51816	cat eye syndrome chromosome region, candidate 1	**11,82**	chr22
CECR2	27443	cat eye syndrome chromosome region, candidate 2	**12,73**	chr22
CECR5	27440	cat eye syndrome chromosome region, candidate 5	**7,64**	chr22
CELSR1	9620	cadherin, EGF LAG seven-pass G-type receptor 1 (flamingo homolog, Drosophi	**3,01**	chr22
CELSR2	1952	cadherin, EGF LAG seven-pass G-type receptor 2 (flamingo homolog, Drosophi	**3,19**	chr1
CELSR3	1951	cadherin, EGF LAG seven-pass G-type receptor 3 (flamingo homolog, Drosophi	**3,93**	chr3
CENPA	1058	centromere protein A, 17kDa	**4,72**	chr2
CENPE	1062	centromere protein E, 312kDa	**5,80**	chr4
CENPF	1063	centromere protein F, 350/400ka (mitosin)	**8,67**	chr1
CENPH	64946	centromere protein H	**10,07**	chr5
CENPJ	55835	centromere protein J	**4,55**	chr13
CENTB1	9744	centaurin, beta 1	**2,28**	chr17
CENTD1	116984	centaurin, delta 1	**10,10**	chr4
CENTG2	116987	Centaurin, gamma 2	**2,77**	chr2
Cep152	22995	KIAA0912 protein	**3,56**	chr15
Cep192	55125	centrosomal protein 192 kDa	**2,21**	chr18
CEP4	9662	centrosomal protein 4	**2,67**	chr4
CEP68	23177	Centrosomal protein 68kDa	**2,49**	chr2
Cep70	80321	p10-binding protein	**2,51**	chr3
Cep72	55722	centrosomal protein 72 kDa	**4,69**	chr5
CETN3	1070	centrin, EF-hand protein, 3 (CDC31 homolog, yeast)	**2,85**	chr5
CFC1	55997	cripto, FRL-1, cryptic family 1	**2,22**	chr2
CFDP1	10428	craniofacial development protein 1	**2,40**	chr16
CGI-09	51605	CGI-09 protein	**2,88**	chr20
CGI-115	51018	CGI-115 protein	**2,97**	chr1
CGI-121	51002	CGI-121 protein	**2,11**	chr2
CGI-14	51005	CGI-14 protein	**2,25**	chr16
CGI-37	51388	comparative gene identification transcript 37	**2,02**	chr16
CGI-69	51629	CGI-69 protein	**2,61**	chr17
CGN	57530	cingulin	**11,26**	chr1
CGNL1	84952	cingulin-like 1	**37,79**	chr15
CHAF1A	10036	chromatin assembly factor 1, subunit A (p150)	**6,90**	chr19
CHAF1B	8208	chromatin assembly factor 1, subunit B (p60)	**3,03**	chr21
CHCHD1	118487	coiled-coil-helix-coiled-coil-helix domain containing 1	**2,72**	chr10
CHCHD3	54927	coiled-coil-helix-coiled-coil-helix domain containing 3	**2,32**	chr1
CHCHD4	131474	coiled-coil-helix-coiled-coil-helix domain containing 4	**2,78**	chr3
CHCHD8	51287	coiled-coil-helix-coiled-coil-helix domain containing 8	**2,15**	chr11
CHD1	1105	chromodomain helicase DNA binding protein 1	**2,65**	chr5
CHD1L	9557	Chromodomain helicase DNA binding protein 1-like	**3,07**	chr1
CHD4	1108	chromodomain helicase DNA binding protein 4	**2,28**	chr12
CHD7	55636	chromodomain helicase DNA binding protein 7	**5,99**	chr8
CHD8	57680	chromodomain helicase DNA binding protein 8	**2,29**	chr14
CHEK1	1111	CHK1 checkpoint homolog (S. pombe)	**5,62**	chr11
CHEK2	11200	CHK2 checkpoint homolog (S. pombe)	**14,75**	chr22
CHERP	10523	calcium homeostasis endoplasmic reticulum protein	**2,65**	chr19

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CHES1	1112	checkpoint suppressor 1	2,72	chr14
CHGB	1114	chromogranin B (secretogranin 1)	5,86	chr20
CHKA	1119	choline kinase alpha	4,38	chr11
CHKB	1120 /// 1375	choline kinase beta /// carnitine palmitoyltransferase 1B (muscle)	2,45	chr22
CHML	1122	choroideremia-like (Rab escort protein 2)	2,28	chr1
CHN1	1123	chimerin (chimaerin) 1	4,05	chr2
CHST10	9486	carbohydrate sulfotransferase 10	2,21	chr2
CHST11	50515	carbohydrate (chondroitin 4) sulfotransferase 11	2,35	chr12
CHST4	10164	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 4	9,16	chr16
CHST6	4166	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 6	2,06	chr16
CHST7	56548	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 7	2,02	chrX
CHST9	83539	carbohydrate (N-acetylgalactosamine 4-0) sulfotransferase 9	7,97	chr18
CHTF18	63922	CTF18, chromosome transmission fidelity factor 18 homolog (S. cerevisiae)	5,24	chr16
CIAPIN1	57019	cytokine induced apoptosis inhibitor 1	2,29	chr18
CIB2	10518	calcium and integrin binding family member 2	5,80	chr15
CIRH1A	84916	cirrhosis, autosomal recessive 1A (cirhin)	3,32	chr16
CIT	11113	citron (rho-interacting, serine/threonine kinase 21)	2,43	chr12
CKAP5	9793	cytoskeleton associated protein 5	2,36	chr11
CKB	1152	creatine kinase, brain	9,17	chr14
CKLFSF4	146223	chemokine-like factor superfamily 4	3,42	chr16
CKLFSF8	152189	chemokine-like factor superfamily 8	4,48	chr3
CKMT1B	1159 /// 548596	creatine kinase, mitochondrial 1B /// creatine kinase, mitochondrial 1A	37,87	chr15
CKS1B	1163	CDC28 protein kinase regulatory subunit 1B	8,07	chr1
CKS2	1164	CDC28 protein kinase regulatory subunit 2	4,93	chr9
CLASP1	23332	Cytoplasmic linker associated protein 1	3,05	chr2
CLCN4	1183	Chloride channel 4	2,66	chrX
CLDN10	9071	claudin 10	26,20	chr13
CLDN23	137075	claudin 23	3,42	chr8
CLDN3	1365	claudin 3	2,34	chr7
CLDN6	9074	claudin 6	67,55	chr1
CLDN7	1366	claudin 7	10,65	chr17
CLGN	1047	calmegin	3,12	chr4
CLK2	1196	CDC-like kinase 2	2,63	chr1
CLN6	54982	ceroid-lipofuscinosis, neuronal 6, late infantile, variant	2,50	chr15
CLNS1A	1207 /// 56650	chloride channel, nucleotide-sensitive, 1A /// chromosome 3 open reading frame	2,23	chr11
CLPX	10845	ClpX caseinolytic peptidase X homolog (E. coli)	2,00	chr15
CLTC	1213	Clathrin, heavy polypeptide (Hc)	2,08	chr17
CLYBL	171425	citrate lyase beta like	3,59	chr13
CMAS	55907	cytidine monophosphate N-acetylneuraminic acid synthetase	2,08	chr12
CNAP1	9918	chromosome condensation-related SMC-associated protein 1	3,95	chr12
CNDP2	55748	CNDP dipeptidase 2 (metallopeptidase M20 family)	3,07	chr18
CNIH4	29097	cornichon homolog 4 (Drosophila)	2,64	chr1
CNKSR2	22866	Connector enhancer of kinase suppressor of Ras 2	24,77	chrX
CNNM2	54805	cyclin M2	2,90	chr10
CNNM3	26505	Cyclin M3	4,25	chr2
CNOT1	23019	CCR4-NOT transcription complex, subunit 1	2,78	chr16
CNOT10	25904	CCR4-NOT transcription complex, subunit 10	2,98	chr3
CNOT2	4848	CCR4-NOT transcription complex, subunit 2	2,09	chr12
CNOT7	29883	CCR4-NOT transcription complex, subunit 7	2,44	chr1
CNTNAP2	26047	contactin associated protein-like 2	56,91	chr7
CNTNAP3	389734 /// 79937	contactin associated protein-like 3 /// contactin associated protein-like 3B	3,27	chr9_random
COBL	23242	cordon-bleu homolog (mouse)	18,16	chr7
COCH	1690	coagulation factor C homolog, cochlin (Limulus polyphemus)	13,70	chr14
COIL	8161	coilin	2,22	chr14
COL4A3BP	10087	collagen, type IV, alpha 3 (Goodpasture antigen) binding protein	2,55	chr5
COL9A1	1297	collagen, type IX, alpha 1	4,24	chr6
COL9A3	1299	collagen, type IX, alpha 3	15,51	chr20
COMMD4	54939	COMM domain containing 4	3,34	chr15
COMMD5	28991	COMM domain containing 5 /// COMM domain containing 5	2,05	chr8
COMTD1	118881	catechol-O-methyltransferase domain containing 1	4,56	chr10
COPG2	26958	Coatomer protein complex, subunit gamma 2	2,62	chr7
COPS3	8533	COP9 constitutive photomorphogenic homolog subunit 3 (Arabidopsis)	2,11	chr17
COQ2	27235	coenzyme Q2 homolog, prenyltransferase (yeast)	5,04	chr4
COQ3	51805	coenzyme Q3 homolog, methyltransferase (yeast)	3,95	chr6
COQ7	10229	coenzyme Q7 homolog, ubiquinone (yeast)	2,92	chr16
CORO2A	7464	coronin, actin binding protein, 2A	2,07	chr9
COX15	1355	COX15 homolog, cytochrome c oxidase assembly protein (yeast)	2,29	chr10

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COX17	10063	COX17 homolog, cytochrome c oxidase assembly protein (yeast)	2,46	chr13
COX5A	9377	cytochrome c oxidase subunit Va	3,32	chr15
COX5B	1329	cytochrome c oxidase subunit Vb	2,22	chr2
COX6A1	1337	cytochrome c oxidase subunit VIa polypeptide 1 /// cytochrome c oxidase subuni	12,36	(vide)
COX7C	1350	cytochrome c oxidase subunit VIIc	2,56	chr5
CPSF2	53981	cleavage and polyadenylation specific factor 2, 100kDa	2,29	chr14
CPSF3	51692	cleavage and polyadenylation specific factor 3, 73kDa	3,79	chr2
CPSF4	10898	cleavage and polyadenylation specific factor 4, 30kDa	2,45	chr7
CPSF6	11052	Cleavage and polyadenylation specific factor 6, 68kDa	4,99	chr12
CPT1A	1374	carnitine palmitoyltransferase 1A (liver)	2,97	chr11
CPT1C	126129	carnitine palmitoyltransferase 1C	3,59	chr19
CPT2	1376	carnitine palmitoyltransferase II	2,64	chr1
CPVL	54504	carboxypeptidase, vitellogenic-like /// carboxypeptidase, vitellogenic-like	10,44	chr7
CPXM	56265	carboxypeptidase X (M14 family)	4,77	chr20
CRABP1	1381	cellular retinoic acid binding protein 1	12,52	chr15
CRB3	92359	crumbs homolog 3 (Drosophila)	2,27	chr19
CREB3L4	148327	cAMP responsive element binding protein 3-like 4	5,92	chr1
CRISPLD1	83690	cysteine-rich secretory protein LCCL domain containing 1	4,72	chr8
CRK7	51755	CDC2-related protein kinase 7	2,77	chr17
CRKL	1399	v-crk sarcoma virus CT10 oncogene homolog (avian)-like	2,31	chr22
CRLF3	51379	Cytokine receptor-like factor 3	2,78	chr17
CRMP1	1400	collapsin response mediator protein 1	3,00	chr4
CROP	51747	cisplatin resistance-associated overexpressed protein	2,10	chr17
CRSP2	9282	cofactor required for Sp1 transcriptional activation, subunit 2, 150kDa	2,63	chrX
CRSP9	9443	cofactor required for Sp1 transcriptional activation, subunit 9, 33kDa	2,11	chr5
CRYM	1428	crystallin, mu	11,70	chr16
CSE1L	1434	CSE1 chromosome segregation 1-like (yeast)	5,22	chr20
CSNK1A1	1452	Casein kinase 1, alpha 1	3,54	chr5
CSNK2A1	1457	casein kinase 2, alpha 1 polypeptide	3,30	chr20
CSNK2A2	1459	Casein kinase 2, alpha prime polypeptide	2,10	chr16
CSPG5	10675	chondroitin sulfate proteoglycan 5 (neuroglycan C)	6,19	chr3
CSPG6	9126	chondroitin sulfate proteoglycan 6 (bamacan)	4,00	chr10
CSPP1	79848	centrosome and spindle pole associated protein 1	2,23	chr8
CSRP2BP	57325	CSRP2 binding protein	3,32	chr20
CSTF1	1477	cleavage stimulation factor, 3' pre-RNA, subunit 1, 50kDa	3,64	chr20
CSTF2	1478	cleavage stimulation factor, 3' pre-RNA, subunit 2, 64kDa	3,39	chrX
CSTF2T	23283	cleavage stimulation factor, 3' pre-RNA, subunit 2, 64kDa, tau variant	3,60	chr10
CTBP2	1488	C-terminal binding protein 2	3,20	chr5
CTCF	10664	CCCTC-binding factor (zinc finger protein)	4,68	chr16
CTDP1	9150	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase	2,38	chr18
CTDSPL2	51496	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosph	2,97	chr15
CTNNA2	1496	catenin (cadherin-associated protein), alpha 2	3,17	chr2
CTNNBL1	56259	catenin, beta like 1 /// catenin, beta like 1	2,82	chr20
CTPS2	56474	CTP synthase II	5,15	chrX
CTSC	1075	cathepsin C	4,28	chr11
CTSL2	1515	cathepsin L2	62,34	chr9
CTTNBP2	83992	Cortactin binding protein 2	3,52	chr7
CUGBP1	10658	CUG triplet repeat, RNA binding protein 1	4,93	chr11
CUGBP2	10659	CUG triplet repeat, RNA binding protein 2	7,20	chr10
CUL1	8454	Cullin 1	5,56	chr7
CUL3	8452	Cullin 3	2,10	chr2
CUL4A	8451	Cullin 4A	2,61	chr13
CUTC	51076	cutC copper transporter homolog (E.coli)	2,57	chr10
CUTL1	1523	Cut-like 1, CCAAT displacement protein (Drosophila)	2,90	chr7
CUTL2	23316	cut-like 2 (Drosophila)	5,06	chr12
CWF19L1	55280	CWF19-like 1, cell cycle control (S. pombe)	2,16	chr10
CWF19L2	143884	CWF19-like 2, cell cycle control (S. pombe)	2,59	chr11
CXADR	1525	coxsackie virus and adenovirus receptor	113,79	chr21
CXCR4	7852	chemokine (C-X-C motif) receptor 4	13,89	chr2
CXorf15	55787	chromosome X open reading frame 15	2,39	chrX
CXorf26	51260	chromosome X open reading frame 26	3,17	chrX
CXorf39	139231	Chromosome X open reading frame 39	2,02	chrX
CXorf45	79868	chromosome X open reading frame 45	2,26	chrX
CXorf50	203429	chromosome X open reading frame 50	3,11	chrX
CXorf53	79184	chromosome X open reading frame 53	2,93	chr5
CXXC1	30827	CXXC finger 1 (PHD domain)	2,02	chr18
CXXC6	80312	CXXC finger 6	31,21	chr10

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CYB5	1528	cytochrome b-5	3,80	chr18
CYB561	1534	cytochrome b-561	7,06	chr17
CYB5R2	51700	cytochrome b5 reductase 2	9,26	chr11
CYC1	1537	cytochrome c-1	2,14	chr8
CYP26A1	1592	cytochrome P450, family 26, subfamily A, polypeptide 1	61,72	chr10
CYP2B7P1	1556	cytochrome P450, family 2, subfamily B, polypeptide 7 pseudogene 1	2,66	chr19
CYP2S1	29785	cytochrome P450, family 2, subfamily S, polypeptide 1	9,85	chr19
CYP4X1	260293	cytochrome P450, family 4, subfamily X, polypeptide 1	3,88	chr1
CYP51A1	1595	cytochrome P450, family 51, subfamily A, polypeptide 1	2,10	chr3
CYYR1	116159	cysteine/tyrosine-rich 1	21,13	chr21
D21S2056E	8568	DNA segment on chromosome 21 (unique) 2056 expressed sequence	3,02	chr21
D4S234E	27065	DNA segment on chromosome 4 (unique) 234 expressed sequence	6,78	chr4
DAB1	1600	Disabled homolog 1 (Drosophila)	11,13	chr1
DAB1	115209 /// 1600	disabled homolog 1 (Drosophila) /// OMA1 homolog, zinc metallopeptidase (S. ce	3,40	chr1
DAG1	1605	dystroglycan 1 (dystrophin-associated glycoprotein 1)	2,11	chr3
DAPK1	1612	death-associated protein kinase 1	17,36	chr9
DARS	1615	aspartyl-tRNA synthetase	3,10	chr2
DATF1	11083	death associated transcription factor 1	8,74	chr20
DAZAP1	26528	DAZ associated protein 1	3,34	chr19
DBC1	1620	deleted in bladder cancer 1	25,86	chr9
DBI	1622	diazepam binding inhibitor (GABA receptor modulator, acyl-Coenzyme A binding	2,46	chr2
DCAMKL1	9201	doublecortin and CaM kinase-like 1	16,27	chr13
DCC1	79075	defective in sister chromatid cohesion homolog 1 (S. cerevisiae)	16,86	chr8
DCI	1632	dodecenoyl-Coenzyme A delta isomerase (3,2 trans-enoyl-Coenzyme A isomera	3,26	chr16
DCLRE1A	9937	DNA cross-link repair 1A (PSO2 homolog, S. cerevisiae)	2,90	chr10
DCLRE1C	64421	DNA cross-link repair 1C (PSO2 homolog, S. cerevisiae)	3,15	chr10
DCP2	167227	DCP2 decapping enzyme homolog (S. cerevisiae)	7,68	chr5
DCPS	28960	decapping enzyme, scavenger	3,49	chr11
DCUN1D2	55208	DCN1, defective in cullin neddylation 1, domain containing 2 (S. cerevisiae)	2,02	chr13
DCUN1D4	23142	DCN1, defective in cullin neddylation 1, domain containing 4 (S. cerevisiae)	2,30	chr4
DCX	1641	doublecortex; lissencephaly, X-linked (doublecortin)	2,51	chrX
DDEFL1	55616	development and differentiation enhancing factor-like 1	2,15	chr1
DDIT4	54541	DNA-damage-inducible transcript 4	3,04	chr10
DDT	1652	D-dopachrome tautomerase	6,00	chr22
DDX11	1663	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 11 (CHL1-like helicase homolog	4,99	chr12
DDX17	10521	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17	3,06	chr22
DDX18	8886	DEAD (Asp-Glu-Ala-Asp) box polypeptide 18	2,79	chr2
DDX20	11218	DEAD (Asp-Glu-Ala-Asp) box polypeptide 20	3,12	chr1
DDX21	9188	DEAD (Asp-Glu-Ala-Asp) box polypeptide 21 /// DEAD (Asp-Glu-Ala-Asp) box po	2,16	chr10
DDX25	29118	DEAD (Asp-Glu-Ala-Asp) box polypeptide 25	37,88	chr11
DDX27	55661	DEAD (Asp-Glu-Ala-Asp) box polypeptide 27	3,41	chr20
DDX28	55794	DEAD (Asp-Glu-Ala-Asp) box polypeptide 28	3,81	chr16
DDX31	64794	DEAD (Asp-Glu-Ala-Asp) box polypeptide 31	2,67	chr9
DDX39	10212	DEAD (Asp-Glu-Ala-Asp) box polypeptide 39	4,18	chr19
DDX3X	1654	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, X-linked	3,08	chrX
DDX3Y	8653	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, Y-linked	2,21	chrY
DDX46	9879	DEAD (Asp-Glu-Ala-Asp) box polypeptide 46	2,70	chr5
DDX48	9775	DEAD (Asp-Glu-Ala-Asp) box polypeptide 48	3,19	chr17
DDX54	79039	DEAD (Asp-Glu-Ala-Asp) box polypeptide 54	2,39	chr12
DDX55	57696	DEAD (Asp-Glu-Ala-Asp) box polypeptide 55	2,69	chr12
DDX6	1656	DEAD (Asp-Glu-Ala-Asp) box polypeptide 6	5,03	chr11
DEDD2	162989	death effector domain containing 2	2,03	chr19
DEK	7913	DEK oncogene (DNA binding)	2,45	chr6
DELGEF	26297	deafness locus associated putative guanine nucleotide exchange factor	2,28	chr11
DENND2C	163259	DENN/MADD domain containing 2C	3,33	chr1
DENR	8562	density-regulated protein	2,37	chr12
DEPDC1	55635	DEP domain containing 1	3,85	chr9
DEPDC1B	55789	DEP domain containing 1B	18,80	chr5
DEPDC5	9681	DEP domain containing 5	2,02	chr22
DFFA	1676	DNA fragmentation factor, 45kDa, alpha polypeptide	2,52	chr1
DFFB	1677	DNA fragmentation factor, 40kDa, beta polypeptide (caspase-activated DNase)	2,21	chr1
DGKZ	8525	diacylglycerol kinase, zeta 104kDa	2,17	chr11
DHCR24	1718	24-dehydrocholesterol reductase	6,02	chr1
DHCR7	1717	7-dehydrocholesterol reductase	2,82	chr11
DHFR	1719	dihydrofolate reductase	7,16	chr4
DHODH	1723	dihydroorotate dehydrogenase	3,08	chr16
DHTKD1	55526	dehydrogenase E1 and transketolase domain containing 1	4,50	chr10

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DHX15	1665	DEAH (Asp-Glu-Ala-His) box polypeptide 15	**3,06**	chr4
DHX30	22907	DEAH (Asp-Glu-Ala-His) box polypeptide 30	**2,09**	chr3
DHX33	56919	DEAH (Asp-Glu-Ala-His) box polypeptide 33	**4,52**	chr17
DHX35	60625	DEAH (Asp-Glu-Ala-His) box polypeptide 35	**4,73**	chr20
DHX36	170506	DEAH (Asp-Glu-Ala-His) box polypeptide 36	**3,14**	chr3
DHX37	57647	DEAH (Asp-Glu-Ala-His) box polypeptide 37	**2,74**	chr12
DHX9	1660	DEAH (Asp-Glu-Ala-His) box polypeptide 9	**5,17**	chr1
DIAPH2	1730	diaphanous homolog 2 (Drosophila)	**5,84**	chrX
DKC1	1736	dyskeratosis congenita 1, dyskerin	**4,97**	chrX
DKFZp434K1	222229	hypothetical protein DKFZp434K1815	**2,01**	chr7
DKFZp434P0	91531	hypothetical protein DKFZp434P055	**4,60**	chr2
DKFZp547E0	283846	hypothetical gene LOC283846	**7,44**	chr16
DKFZP564J1	25854	DKFZP564J102 protein	**6,02**	chr4
DKFZp564J1	54458	DKFZp564J157 protein	**2,14**	chr12
DKFZP586A0	25840	DKFZP586A0522 protein	**11,85**	chr12
DKFZp586I14	222161	hypothetical protein DKFZp586I1420	**20,32**	chr7
DKFZP761M1	54492	hypothetical protein DKFZP761M1511	**2,83**	chr5
DKFZp761P0	157285	Hypothetical protein DKFZp761P0423	**4,43**	chr8
DKFZp762E1	55355	hypothetical protein DKFZp762E1312	**6,88**	chr2
DKFZp762H1	256306	hypothetical protein DKFZp762H185	**2,09**	chr17
DKFZp762I13	136051	hypothetical protein DKFZp762I137	**2,87**	chr7
DKFZp779O1	374899	hypothetical protein DKFZp779O175	**2,87**	chr19
DLAT	1737	dihydrolipoamide S-acetyltransferase (E2 component of pyruvate dehydrogenas	**3,28**	chr11
DLD	1738	Dihydrolipoamide dehydrogenase (E3 component of pyruvate dehydrogenase c	**2,65**	chr7
DLEU1	10301	deleted in lymphocytic leukemia, 1	**2,07**	chr13
DLG3	1741	discs, large homolog 3 (neuroendocrine-dlg, Drosophila)	**5,20**	chrX
DLG7	9787	discs, large homolog 7 (Drosophila)	**11,38**	chr14
DLL1	28514	delta-like 1 (Drosophila)	**2,48**	chr6
DLNB14	338657	similar to DLNB14	**3,17**	chr11
DMAP1	55929	DNA methyltransferase 1 associated protein 1	**2,59**	chr1
DMXL1	1657	Dmx-like 1	**2,08**	chr5
DNA2L	1763	DNA2 DNA replication helicase 2-like (yeast)	**11,44**	chr10
DNAJA2	10294	DnaJ (Hsp40) homolog, subfamily A, member 2	**3,03**	chr16
DNAJA4	55466	DnaJ (Hsp40) homolog, subfamily A, member 4	**2,66**	chr15
DNAJB6	10049	DnaJ (Hsp40) homolog, subfamily B, member 6	**3,26**	chr7
DNAJC17	55192	DnaJ (Hsp40) homolog, subfamily C, member 17	**2,38**	chr15
DNAJC19	131118	DnaJ (Hsp40) homolog, subfamily C, member 19	**2,65**	chr14
DNAJC7	7266	DnaJ (Hsp40) homolog, subfamily C, member 7	**3,31**	chr17
DNAJC9	23234	DnaJ (Hsp40) homolog, subfamily C, member 9	**3,02**	chr10
DNCH2	79659	dynein, cytoplasmic, heavy polypeptide 2	**2,71**	chr11
DND1	373863	dead end homolog 1 (zebrafish)	**5,67**	chr17
DNMT1	1786	DNA (cytosine-5-)-methyltransferase 1	**2,76**	chr19
DNMT2	1787	DNA (cytosine-5-)-methyltransferase 2	**4,47**	chr10
DNMT3A	1788	DNA (cytosine-5-)-methyltransferase 3 alpha	**17,15**	chr2
DNMT3B	1789	DNA (cytosine-5-)-methyltransferase 3 beta	**162,94**	chr20
DNPEP	23549	aspartyl aminopeptidase	**2,07**	chr2
DOCK3	1795	dedicator of cytokinesis 3	**2,22**	chr3
DOCK4	9732	dedicator of cytokinesis 4	**2,49**	chr7
DONSON	29980	downstream neighbor of SON	**3,03**	chr21
DOT1L	84444	DOT1-like, histone H3 methyltransferase (S. cerevisiae)	**2,17**	chr19
DPH2	1802	DPH2 homolog (S. cerevisiae)	**3,48**	chr1
DPH5	51611	DPH5 homolog (S. cerevisiae)	**2,40**	chr1
DPP3	10072	dipeptidylpeptidase 3	**2,39**	chr11
DPPA2	151871	developmental pluripotency associated 2	**13,48**	chr3
DPPA3	359787	developmental pluripotency associated 3	**8,51**	chr14
DPPA4	55211	developmental pluripotency associated 4	**175,49**	chr3
DPPA5	340168	developmental pluripotency associated 5	**4,27**	chr6
DPYSL3	1809	dihydropyrimidinase-like 3	**6,42**	chr5
DRIM	27340	down-regulated in metastasis	**2,11**	chr12
DSC2	1824	desmocollin 2	**18,30**	chr18
DSU	55686	dilute suppressor	**14,11**	chr2
DTL	51514	denticleless homolog (Drosophila)	**13,63**	chr1
DTNA	1837	dystrobrevin, alpha	**4,74**	chr18
DTX3	196403	deltex 3 homolog (Drosophila)	**2,75**	chr12
DTX4	23220	deltex 4 homolog (Drosophila)	**2,25**	chr11
DTYMK	1841	deoxythymidylate kinase (thymidylate kinase)	**2,48**	chr2_random
DUS1L	64118	dihydrouridine synthase 1-like (S. cerevisiae)	**2,02**	chr17

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DUS3L	56931	dihydrouridine synthase 3-like (S. cerevisiae)	4,04	chr19
DUS4L	11062	dihydrouridine synthase 4-like (S. cerevisiae)	3,95	chr7
DUSP16	80824	dual specificity phosphatase 16	5,74	chr12
DUSP6	1848	dual specificity phosphatase 6	2,83	chr12
DUT	1854	dUTP pyrophosphatase	13,41	chr15
DVL2	1856	dishevelled, dsh homolog 2 (Drosophila)	2,32	chr17
DXS9879E	8270	DNA segment on chromosome X (unique) 9879 expressed sequence	3,77	chrX
DYNLL2	140735	Dynein, light chain, LC8-type 2	2,10	chr17
DZIP3	9666	zinc finger DAZ interacting protein 3	4,45	chr3
E2-230K	63893	likely ortholog of mouse ubiquitin-conjugating enzyme E2-230K	3,21	chr17
E2F1	1869	E2F transcription factor 1	2,23	chr20
E2F3	1871	E2F transcription factor 3	2,45	chr6
E2F5	1875	E2F transcription factor 5, p130-binding	6,01	chr8
E2F8	79733	E2F transcription factor 8	6,77	chr11
E2IG5	26355	growth and transformation-dependent protein	3,50	chr3
EAF2	55840	ELL associated factor 2	2,93	chr3
EBAG9	9166	estrogen receptor binding site associated, antigen, 9	2,22	chr8
EBP	10682	emopamil binding protein (sterol isomerase)	3,70	chrX
EBPL	84650	emopamil binding protein-like	2,70	chr13
ECAT11	54596	hypothetical protein FLJ10884	671,16	chr1
ECH1	1891	enoyl Coenzyme A hydratase 1, peroxisomal	2,55	chr19
ECHDC2	55268	enoyl Coenzyme A hydratase domain containing 2	2,49	chr1
ECHDC3	79746	enoyl Coenzyme A hydratase domain containing 3	2,64	chr10
ECT2	1894	epithelial cell transforming sequence 2 oncogene	3,24	chr3
EDD1	51366	E3 ubiquitin protein ligase, HECT domain containing, 1	3,16	chr8
EDG4	9170	endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 4	13,14	chr19
EDG7	23566	Endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 7	9,01	chr1
EDNRB	1910	endothelin receptor type B	22,33	chr13
EED	8726	embryonic ectoderm development	2,55	chr11
EEF1E1	9521	eukaryotic translation elongation factor 1 epsilon 1	2,97	chr6
EFHC1	114327	EF-hand domain (C-terminal) containing 1	2,26	chr6
EFNA4	1945	ephrin-A4	2,45	chr1
EFNA5	1946	Ephrin-A5	3,06	chr5
EFNB3	1949	ephrin-B3	2,29	chr17
EFTUD1	79631	elongation factor Tu GTP binding domain containing 1	3,56	chr15
EGLN3	112399	egl nine homolog 3 (C. elegans)	3,49	chr14
EHHADH	1962	enoyl-Coenzyme A, hydratase/3-hydroxyacyl Coenzyme A dehydrogenase	2,01	chr3
EHMT1	79813	euchromatic histone-lysine N-methyltransferase 1	3,31	chr9
EHMT2	10919	euchromatic histone-lysine N-methyltransferase 2	4,70	chr6
EID3	493861	E1A-like inhibitor of differentiation 3	2,08	chr12
EIF1AX	1964	eukaryotic translation initiation factor 1A, X-linked	3,04	chr1
EIF2AK4	440275	eukaryotic translation initiation factor 2 alpha kinase 4	2,59	chr15
EIF2B4	8890	eukaryotic translation initiation factor 2B, subunit 4 delta, 67kDa	2,18	chr2
EIF2C2	27161	Eukaryotic translation initiation factor 2C, 2	3,65	chr15
EIF2S2	8894	Eukaryotic translation initiation factor 2, subunit 2 beta, 38kDa	2,19	chr2
EIF3S10	8661	eukaryotic translation initiation factor 3, subunit 10 theta, 150/170kDa	2,07	chr10
EIF3S12	27335	eukaryotic translation initiation factor 3, subunit 12	2,73	chr19
EIF3S4	8666	eukaryotic translation initiation factor 3, subunit 4 delta, 44kDa	2,04	chr19
EIF3S8	8663	eukaryotic translation initiation factor 3, subunit 8, 110kDa	2,74	chr16
EIF3S9	8662	eukaryotic translation initiation factor 3, subunit 9 eta, 116kDa	5,05	chr7
EIF4A1	1973	eukaryotic translation initiation factor 4A, isoform 1 /// eukaryotic translation initiat	2,05	chr12
EIF4E	1977	eukaryotic translation initiation factor 4E	2,83	chr4
EIF4E3	317649	eukaryotic translation initiation factor 4E member 3	3,95	chr3
EIF4EBP2	1979	eukaryotic translation initiation factor 4E binding protein 2	7,55	chr10
EIF4G3	8672	Eukaryotic translation initiation factor 4 gamma, 3	2,36	chr1
EIF5	1983	eukaryotic translation initiation factor 5	2,34	chr14
ELAC2	60528	elaC homolog 2 (E. coli)	2,36	chr17
ELAVL1	1994	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 1 (Hu antigen R)	2,03	chr19
ELAVL2	1993	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 2 (Hu antigen B)	8,46	chr9
ELL3	80237	elongation factor RNA polymerase II-like 3	2,15	chr15
ELOVL6	79071	ELOVL family member 6, elongation of long chain fatty acids (FEN1/Elo2, SUR4	5,58	chr4
ELOVL7	79993	ELOVL family member 7, elongation of long chain fatty acids (yeast)	14,29	chr5
ELP4	26610	elongation protein 4 homolog (S. cerevisiae)	2,12	chr11
EME1	146956	essential meiotic endonuclease 1 homolog 1 (S. pombe)	2,93	chr17
EMID2	136227	EMI domain containing 2	5,51	chr7
EML4	27436	echinoderm microtubule associated protein like 4	2,26	chr2
ENO1	2023 /// 6636	enolase 1, (alpha) /// small nuclear ribonucleoprotein polypeptide F	4,19	chr12

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ENO2	2026	enolase 2 (gamma, neuronal)	2,35	chr12
ENO3	2027	enolase 3 (beta, muscle)	3,56	chr17
ENOSF1	55556	enolase superfamily member 1	2,85	chr18
ENPP1	5167	ectonucleotide pyrophosphatase/phosphodiesterase 1	4,19	chr6
ENPP2	5168	ectonucleotide pyrophosphatase/phosphodiesterase 2 (autotaxin)	3,22	chr8
ENPP4	22875	ectonucleotide pyrophosphatase/phosphodiesterase 4 (putative function)	4,56	chr6
ENPP5	59084	ectonucleotide pyrophosphatase/phosphodiesterase 5 (putative function)	3,14	chr6
ENSA	2029	endosulfine alpha	3,90	chr1
ENY2	56943	enhancer of yellow 2 homolog (Drosophila)	2,13	chr8
EOMES	8320	eomesodermin homolog (Xenopus laevis)	3,86	chr3
EP300	2033	E1A binding protein p300	2,85	chr22
EP400	57634	E1A binding protein p400	2,39	chr12
EPB41	2035	Erythrocyte membrane protein band 4.1 (elliptocytosis 1, RH-linked)	8,93	chr1
EPB41L2	2037	erythrocyte membrane protein band 4.1-like 2	2,38	chr6
EPB41L4B	54566	erythrocyte membrane protein band 4.1 like 4B	8,75	chr9
EPB41L5	57669	erythrocyte membrane protein band 4.1 like 5	9,76	chr2
EPC2	26122	enhancer of polycomb homolog 2 (Drosophila)	2,34	chr2
EPHA1	2041	EPH receptor A1	14,27	chr7
EPHA7	2045	EPH receptor A7	5,60	chr6
EPHB1	2047	EPH receptor B1	3,65	chr3
EPHB4	2050	EPH receptor B4	2,21	chr7
EPPK1	83481	epiplakin 1	7,19	chr8
EPS8L1	54869	EPS8-like 1	5,16	chr19
EPS8L2	64787	EPS8-like 2	5,61	chr11
ERBB2	2064	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma	4,29	chr17
ERBB3	2065	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)	33,97	chr12
ERBP	30836	estrogen receptor binding protein	2,63	chr1
ERCC3	2071	excision repair cross-complementing rodent repair deficiency, complementation	2,30	chr2
ERH	2079	enhancer of rudimentary homolog (Drosophila) /// enhancer of rudimentary homo	2,41	chr14
ERP29	10961	endoplasmic reticulum protein 29	3,32	chr12
ESCO1	114799	establishment of cohesion 1 homolog 1 (S. cerevisiae)	4,22	chr18
ESPL1	9700	extra spindle poles like 1 (S. cerevisiae)	13,37	chr12
ESRRG	2104	estrogen-related receptor gamma	2,43	chr1
EST1B	23381	Est1p-like protein B	2,16	chr1
ETF1	2107	eukaryotic translation termination factor 1	2,06	chr5
ETNK1	55500	Ethanolamine kinase 1	3,92	chr12
ETV1	2115	ets variant gene 1	5,25	chr7
ETV4	2118	ets variant gene 4 (E1A enhancer binding protein, E1AF) /// ets variant gene 4 (E	3,51	chr22
EWSR1	2130	Ewing sarcoma breakpoint region 1	2,96	chr22
EXO1	9156	exonuclease 1	6,17	chr1
EXOSC1	51013	exosome component 1	2,14	chr10
EXOSC10	5394	exosome component 10	2,25	chr1
EXOSC2	23404	exosome component 2	5,05	chr9
EXOSC3	51010	exosome component 3	5,76	chr9
EXOSC4	54512	exosome component 4	2,62	chr8
EXOSC5	56915	exosome component 5	4,29	chr19
EXOSC7	23016	exosome component 7	4,46	chr3
EXOSC8	11340	exosome component 8	3,75	chr13
EXOSC9	5393	exosome component 9	3,99	chr4
EZH2	2146	enhancer of zeste homolog 2 (Drosophila)	5,64	chr7
F11R	50848	F11 receptor	56,82	chr1
FABP5	2171	fatty acid binding protein 5 (psoriasis-associated)	6,51	chr7
FABP7	2173	fatty acid binding protein 7, brain	12,13	chr6
FADS1	3992	fatty acid desaturase 1	2,67	chr11
FAF1	11124	Fas (TNFRSF6) associated factor 1	2,37	chr1
FAHD2A	51011	fumarylacetoacetate hydrolase domain containing 2A	2,01	chr2
FAIM	55179	Fas apoptotic inhibitory molecule	3,11	chr3
FALZ	2186	fetal Alzheimer antigen	17,12	chr17
FAM20A	54757	Family with sequence similarity 20, member A	2,63	chr17
FAM29A	54801	family with sequence similarity 29, member A	5,17	chr7
FAM33A	348235	family with sequence similarity 33, member A	3,05	chr17
FAM44B	91272	family with sequence similarity 44, member B	2,74	chr5
FAM46B	115572	family with sequence similarity 46, member B	28,85	chr1
FAM48A	55578	family with sequence similarity 48, member A	2,31	chr13
FAM49B	51571	Family with sequence similarity 49, member B	9,78	chr8
FAM54A	113115	family with sequence similarity 54, member A	4,24	chr6
FAM59A	64762	family with sequence similarity 59, member A	4,06	chr18

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FAM59B	150946	family with sequence similarity 59, member B	2,25	chr2
FAM60A	58516	family with sequence similarity 60, member A	8,19	chr1
FAM61A	26065	family with sequence similarity 61, member A	2,22	chr19
FAM61B	149986	family with sequence similarity 61, member B	2,10	chr20
FAM62B	57488	family with sequence similarity 62 (C2 domain containing) member B	2,08	chr7
FAM64A	54478	Family with sequence similarity 64, member A	11,88	chr17
FAM72A	389835	family with sequence similarity 72, member A	12,60	chr1
FAM76A	199870	Family with sequence similarity 76, member A	3,37	chr1
FAM76B	143684	family with sequence similarity 76, member B	2,44	chr11
FAM7A2	89839	Family with sequence similarity 7, member A2	2,05	(vide)
FAM80A	284716	family with sequence similarity 80, member A	2,35	chr1
FAM80B	57494	Family with sequence similarity 80, member B	2,89	chr12
FAM96A	84191	family with sequence similarity 96, member A	2,59	chr15
FAM98B	283742	Family with sequence similarity 98, member B	2,61	chr15
FANCD2	2177	Fanconi anemia, complementation group D2	11,33	chr3
FANCE	2178	Fanconi anemia, complementation group E	2,07	chr6
FANCF	2188	Fanconi anemia, complementation group F	3,58	chr11
FANCG	2189	Fanconi anemia, complementation group G	6,29	chr9
FANCL	55120	Fanconi anemia, complementation group L	5,67	chr2
FANCM	57697	Fanconi anemia, complementation group M	2,86	chr14
FARSLA	2193	phenylalanine-tRNA synthetase-like, alpha subunit	2,12	chr19
FASN	2194	fatty acid synthase	2,76	chr6
FBL	2091	fibrillarin /// fibrillarin	3,66	chr19
FBXL10	84678	F-box and leucine-rich repeat protein 10	6,00	chr12
FBXL16	146330	F-box and leucine-rich repeat protein 16	2,65	chr16
FBXL20	84961	F-box and leucine-rich repeat protein 20	2,20	chr17
FBXL6	26233	F-box and leucine-rich repeat protein 6	2,28	chr8
FBXL7	23194	F-box and leucine-rich repeat protein 7	2,12	chr5
FBXO11	80204	F-box protein 11	2,68	chr2
FBXO2	26232	F-box protein 2	4,30	chr1
FBXO25	26260	F-box protein 25	4,62	chr8
FBXO28	23219	F-box protein 28	3,91	chr1
FBXO41	150726	F-box protein 41	2,25	chr2
FBXO45	200933	F-box protein 45	2,45	chr3
FBXO5	26271	F-box protein 5	5,11	chr6
FBXW4	6468	F-box and WD-40 domain protein 4	2,29	chr10
FDFT1	2222	farnesyl-diphosphate farnesyltransferase 1	2,88	chr8
FDPS	2224	farnesyl diphosphate synthase (farnesyl pyrophosphate synthetase, dimethylally	2,62	chr1
FEM1A	55527	Fem-1 homolog a (C.elegans)	2,10	chr13
FEN1	2237	flap structure-specific endonuclease 1	7,50	chr11
FGD4	121512	FYVE, RhoGEF and PH domain containing 4	19,15	chr12
FGD5	152273	FYVE, RhoGEF and PH domain containing 5	2,51	chr3
FGD6	55785	FYVE, RhoGEF and PH domain containing 6	2,42	chr12
FGF11	2256	fibroblast growth factor 11	2,99	chr17
FGF13	2258	fibroblast growth factor 13	32,75	chrX
FGF19	9965	fibroblast growth factor 19	3,16	chr11
FGF4	2249	fibroblast growth factor 4 (heparin secretory transforming protein 1, Kaposi sarco	12,46	chr11
FGFR1	2260	Fibroblast growth factor receptor 1 (fms-related tyrosine kinase 2, Pfeiffer syndro	7,15	chr8
FGFR1OP	11116	FGFR1 oncogene partner	3,43	chr6
FGFR2	2263	fibroblast growth factor receptor 2 (bacteria-expressed kinase, keratinocyte grow	28,00	chr10
FGFR3	2261	fibroblast growth factor receptor 3 (achondroplasia, thanatophoric dwarfism)	13,26	chr4
FGFR4	2264	fibroblast growth factor receptor 4	4,27	chr5
FIGN	55137	Fidgetin	3,25	chr2
FIGNL1	63979	fidgetin-like 1	2,64	chr7
FILIP1	27145	filamin A interacting protein 1	6,89	chr6
FKBP1B	2281	FK506 binding protein 1B, 12.6 kDa	5,59	chr2
FKBP3	2287	FK506 binding protein 3, 25kDa	2,87	chr14
FKBP4	2288	FK506 binding protein 4, 59kDa	3,43	chr12
FKBP5	2289	FK506 binding protein 5	5,45	chr6
FKBPL	63943	FK506 binding protein like	2,31	chr6
FKSG14	64105	leucine zipper protein FKSG14	3,99	chr5
FLAD1	80308	Fad1, flavin adenine dinucleotide synthetase, homolog (yeast)	3,65	chr1
FLJ10006	55677	hypothetical protein FLJ10006	2,66	chr2
FLJ10154	55082	Hypothetical protein FLJ10154	2,39	chr13
FLJ10213	55096	hypothetical protein FLJ10213	2,62	chr3
FLJ10374	55702	hypothetical protein FLJ10374	2,74	chr19
FLJ10379	55133	hypothetical protein FLJ10379	2,26	chr2

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FLJ10415	55139	hypothetical protein FLJ10415	**2,14**	chr2
FLJ10534	55720	hypothetical protein FLJ10534	**4,32**	chr17
FLJ10652	55196	hypothetical protein FLJ10652	**19,55**	chr12
FLJ10700	55731	hypothetical protein FLJ10700	**3,52**	chr17
FLJ10707	55209	hypothetical protein FLJ10707	**2,24**	chr3
FLJ10719	55215	hypothetical protein FLJ10719	**9,90**	chr15
FLJ10774	55226	N-acetyltransferase-like protein	**4,48**	chr11
FLJ10803	55744	hypothetical protein FLJ10803	**3,73**	chr7
FLJ10847	55244	hypothetical protein FLJ10847	**2,03**	chr17
FLJ11021	65117	similar to splicing factor, arginine/serine-rich 4	**2,01**	chr12
FLJ11127	54491	hypothetical protein FLJ11127	**2,08**	chr5
FLJ11200	55325	hypothetical protein FLJ11200	**2,10**	chr4
FLJ11301	55341	hypothetical protein FLJ11301	**3,34**	chr3
FLJ11305	55795	hypothetical protein FLJ11305	**2,66**	chr13
FLJ11712	79621	hypothetical protein FLJ11712	**2,68**	chr13
FLJ11806	79882	nuclear protein UKp68	**3,09**	chr14
FLJ11850	64752	hypothetical protein FLJ11850	**2,38**	chr4
FLJ12436	79714	hypothetical protein FLJ12436	**3,28**	chr3
FLJ12443	79888	hypothetical protein FLJ12443	**5,35**	chr5
FLJ12505	79805	hypothetical protein FLJ12505	**13,72**	chr1
FLJ12610	79840	hypothetical protein FLJ12610	**2,35**	chr2
FLJ12684	79584	hypothetical protein FLJ12684	**5,45**	chr4
FLJ12788	64427	hypothetical protein FLJ12788	**2,03**	chr2
FLJ12949	65095	hypothetical protein FLJ12949	**2,93**	chr19
FLJ13089	80018	hypothetical protein FLJ13089	**2,14**	chr12
FLJ13149	60493	hypothetical protein FLJ13149	**2,37**	chr20
FLJ13213	79811	modulator of estrogen induced transcription	**3,91**	chr15
FLJ13220	60558	hypothetical protein FLJ13220	**2,52**	chr4
FLJ13273	79807	hypothetical protein FLJ13273	**2,61**	chr4
FLJ13305	84140	hypothetical protein FLJ13305	**7,27**	chr2
FLJ13491	79676	hypothetical protein FLJ13491	**2,20**	chr12
FLJ13614	84142	hypothetical protein FLJ13614	**2,51**	chr4
FLJ13848	79829	hypothetical protein FLJ13848	**2,69**	chr11
FLJ13909	80178	hypothetical protein FLJ13909	**7,82**	chr16
FLJ13910	64795	hypothetical protein FLJ13910	**5,68**	chr2
FLJ13912	64785	hypothetical protein FLJ13912	**3,44**	chr16
FLJ13984	79828	hypothetical protein FLJ13984	**3,46**	chr2
FLJ14001	79730	Hypothetical protein FLJ14001	**6,58**	chr4
FLJ14503	256714	hypothetical protein FLJ14503	**3,30**	chrX
FLJ14624	84899	hypothetical protein FLJ14624	**2,35**	chr13
FLJ14627	84900	hypothetical protein FLJ14627	**3,49**	chr12
FLJ14668	84908	hypothetical protein FLJ14668	**3,18**	chr2
FLJ14712	221806	hypothetical protein FLJ14712	**16,52**	chr7
FLJ14827	84934	hypothetical protein FLJ14827	**2,46**	chr12
FLJ14981	84954	hypothetical protein FLJ14981	**2,05**	chr19
FLJ20105	54821	FLJ20105 protein	**7,60**	chrX
FLJ20209	57245	hypothetical protein FLJ20209	**3,42**	chr3
FLJ20211	54859	hypothetical protein FLJ20211	**2,75**	chr3
FLJ20273	54502	RNA-binding protein	**38,26**	chr4
FLJ20297 /// F	150776 /// 55627	hypothetical protein FLJ20297 /// FLJ41352 protein	**2,97**	chr2
FLJ20309	54891	Hypothetical protein FLJ20309	**3,09**	chr2
FLJ20323	54468	hypothetical protein FLJ20323 /// hypothetical protein FLJ20323	**2,94**	chr7
FLJ20397	54919	hypothetical protein FLJ20397	**2,88**	chr7
FLJ20449	54937	hypothetical protein FLJ20449	**9,15**	chr13
FLJ20485	54517	hypothetical protein FLJ20485	**2,75**	chr7
FLJ20512	54958	hypothetical protein FLJ20512	**4,19**	chr19
FLJ20516	54962	timeless-interacting protein	**4,34**	chr15
FLJ20551	54977	hypothetical protein FLJ20551	**2,26**	chr3
FLJ20582	54989	hypothetical protein FLJ20582	**2,97**	chrX
FLJ20628	55006	hypothetical protein FLJ20628 /// hypothetical protein FLJ20628	**2,81**	chr2
FLJ20641	55010	hypothetical protein FLJ20641	**6,83**	chr12
FLJ20643	55011	hypothetical protein FLJ20643	**2,54**	chr19
FLJ20674	54621	Hypothetical protein FLJ20674	**10,63**	chr12
FLJ20758	55037	FLJ20758 protein	**5,11**	chr2
FLJ20859	64745	FLJ20859 gene	**3,05**	chr14
FLJ21103	79607	hypothetical protein FLJ21103	**2,70**	chr11
FLJ21148	79918	hypothetical protein FLJ21148	**7,14**	chr16

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FLJ21168	80143	hypothetical protein FLJ21168 /// hypothetical protein FLJ21168	**2,05**	chr1
FLJ21816	79728	hypothetical protein FLJ21816	**3,96**	chr16
FLJ21839	60509	hypothetical protein FLJ21839	**2,65**	chr2
FLJ21865	64772	endo-beta-N-acetylglucosaminidase	**2,23**	chr17
FLJ21901	79675	hypothetical protein FLJ21901	**4,79**	chr2
FLJ21924	79832	hypothetical protein FLJ21924	**6,81**	chr11
FLJ21945	80304	hypothetical protein FLJ21945	**3,73**	chr2
FLJ21963	79611	FLJ21963 protein	**7,45**	chr12
FLJ22104	65084	hypothetical protein FLJ22104	**2,64**	chr11
FLJ22318	64777	hypothetical protein FLJ22318	**2,99**	chr5
FLJ22531	79703	hypothetical protein FLJ22531	**3,97**	chr11
FLJ22555	79568	hypothetical protein FLJ22555	**2,57**	chr2
FLJ22624	79866	FLJ22624 protein	**5,99**	chr13
FLJ22662	79887	hypothetical protein FLJ22662	**26,69**	chr12
FLJ22795	80154	hypothetical protein FLJ22795	**2,05**	chr15
FLJ23342	79684	Hypothetical protein FLJ23342	**3,02**	chr11
FLJ23441	79731	hypothetical protein FLJ23441	**3,91**	chr11
FLJ23556	79938	hypothetical protein FLJ23556	**6,18**	chr10
FLJ23861	151050	hypothetical protein FLJ23861	**2,76**	chr2
FLJ25006	124923	hypothetical protein FLJ25006	**6,04**	chr17
FLJ25076	134111	similar to CG4502-PA	**4,90**	chr5
FLJ25222	374666	CXYorf1-related protein	**2,71**	chr2
FLJ25416	220042	hypothetical protein FLJ25416	**9,94**	chr11
FLJ25778	254048	Hypothetical protein FLJ25778	**4,22**	chr7
FLJ25967	440823	hypothetical gene supported by AK098833	**27,57**	chr22
FLJ26175	388566	FLJ26175 protein	**2,23**	chr19
FLJ27354	400761	Hypothetical gene supported by AK130864	**14,74**	chr1
FLJ30046	122060	hypothetical protein FLJ30046	**15,55**	chr13
FLJ30428	150519	similar to hypothetical protein A230046P18; cDNA sequence BC055759	**8,21**	chr2
FLJ30656	124801	hypothetical protein FLJ30656	**2,81**	chr8
FLJ30707	220108	hypothetical protein FLJ30707	**12,56**	chr13
FLJ31204	158584	hypothetical protein FLJ31204	**2,64**	chrX
FLJ31978	144423	hypothetical protein FLJ31978	**2,16**	chr12
FLJ32009	220001	hypothetical protein FLJ32009	**2,44**	chr11
FLJ32363	375444	FLJ32363 protein	**3,57**	chr5
FLJ32452	93058	hypothetical protein FLJ32452	**3,62**	chr12
FLJ32499	124637	hypothetical protein FLJ32499	**2,51**	chr17
FLJ32745	165055	hypothetical protein FLJ32745	**4,98**	chr2
FLJ32810	143872	hypothetical protein FLJ32810	**2,59**	chr11
FLJ33008	145748	hypothetical protein FLJ33008	**2,13**	chr15
FLJ33318	162461	hypothetical protein FLJ33318	**2,43**	chr17
FLJ34208	401106	Hypothetical gene supported by AK091527	**2,22**	chr3
FLJ35119	126074	hypothetical protein FLJ35119	**3,15**	chr19
FLJ35348	266655	FLJ35348	**3,46**	chr9
FLJ35801	150291	hypothetical protein FLJ35801	**3,03**	chr22
FLJ35934	400579 /// 400584	FLJ35934 protein /// hypothetical gene supported by AK093253	**2,15**	chr17
FLJ35954	166968	hypothetical protein FLJ35954	**2,74**	chr5
FLJ36116	388666	hypothetical locus LOC388666	**9,18**	chr1
FLJ37478	339983	Hypothetical protein LOC339983	**2,89**	chr4
FLJ37953	129450	hypothetical protein FLJ37953	**2,11**	chr2
FLJ38426	283742	hypothetical protein FLJ38426	**2,24**	chr15
FLJ38973	205327	hypothetical protein FLJ38973	**4,57**	chr2
FLJ38991	285521	mitochondrial COX18	**2,14**	chr4
FLJ39616	51275	apoptosis-related protein PNAS-1	**2,64**	chr12
FLJ39739	388685	FLJ39739 protein	**5,96**	chr1
FLJ40092	401196	FLJ40092 protein	**6,32**	chr5
FLJ40142	400073	FLJ40142 protein	**2,30**	chr12
FLJ40432	151195	hypothetical protein FLJ40432	**2,54**	chr2
FLJ40869	348654	hypothetical protein FLJ40869	**2,14**	chr2
FLJ41131	284325	FLJ41131 protein	**2,32**	chr19
FLJ44186	346689	FLJ44186 protein	**5,11**	chr7
FLJ46072	286077	FLJ46072 protein	**7,62**	chr8
FLJ46419	388507	FLJ46419 protein	**11,93**	chr19
FLJ90024	129303	fasting-inducible integral membrane protein TM6P1	**2,01**	chr2
FLJ90036	255403	hypothetical protein FLJ90036	**4,15**	chr4
FLJ90086	389389	Similar to AI661453 protein	**4,72**	chr6
FLJ90231	283176	hypothetical protein FLJ90231	**18,33**	chr11

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FLJ90652	283899	hypothetical protein FLJ90652	2,34	chr16
FLT1	2321	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular perme	3,96	chr13
FLVCR	28982	feline leukemia virus subgroup C cellular receptor	15,20	chr1
FN5	56935	FN5 protein	2,60	chr11
FNBP1L	54874	Formin binding protein 1-like	4,18	chr1
FNBP3	55660	formin binding protein 3	2,53	chr2
FOS	2353	v-fos FBJ murine osteosarcoma viral oncogene homolog	3,11	chr14
FOXA3	3171	forkhead box A3	29,89	chr19
FOXD3	27022	Forkhead box D3	4,63	chr1
FOXH1	8928	Forkhead box H1	16,42	chr8
FOXM1	2305	forkhead box M1	5,94	chr12
FOXO1A	2308	forkhead box O1A (rhabdomyosarcoma)	10,79	chr13
FOXO6	343552	forkhead box protein O6	6,29	chr1
FRAG1	27315	FGF receptor activating protein 1	4,79	chr11
FRAS1	80144	Fraser syndrome 1	47,12	chr4
FRAT1	10023	frequently rearranged in advanced T-cell lymphomas	4,48	chr10
FRAT2	23401	frequently rearranged in advanced T-cell lymphomas 2	28,64	chr10
FREM2	341640	FRAS1 related extracellular matrix protein 2	17,37	chr13
FSD1	79187	fibronectin type III and SPRY domain containing 1	3,17	chr19
FSHPRH1	2491	FSH primary response (LRPR1 homolog, rat) 1	2,45	chrX
FTSJ2	29960	FtsJ homolog 2 (E. coli)	2,61	chr7
FTSJ3	117246	FtsJ homolog 3 (E. coli)	2,03	chr17
FUBP1	8880	Far upstream element (FUSE) binding protein 1	3,27	chr1
FUS	2521	fusion (involved in t(12;16) in malignant liposarcoma)	6,51	chr16
FUSIP1	10772	FUS interacting protein (serine/arginine-rich) 1	2,83	chr1_random
FUT1	2523	fucosyltransferase 1 (galactoside 2-alpha-L-fucosyltransferase)	3,99	chr12
FUT10	84750	fucosyltransferase 10 (alpha (1,3) fucosyltransferase)	2,78	chr8
FUT4	2526	fucosyltransferase 4 (alpha (1,3) fucosyltransferase, myeloid-specific)	2,77	chr11
FXN	2395	frataxin	3,59	chr9
FXR1	8087	Fragile X mental retardation, autosomal homolog 1	3,89	chr3
FXYD6	53826	FXYD domain containing ion transport regulator 6	9,99	chr11
FZD3	7976	frizzled homolog 3 (Drosophila)	11,16	chr8
FZD5	7855	frizzled homolog 5 (Drosophila)	3,52	chr2
G3BP	10146	Ras-GTPase-activating protein SH3-domain-binding protein	3,99	chr5
G3BP2	9908	Ras-GTPase activating protein SH3 domain-binding protein 2	3,32	chr4
GAB1	2549	GRB2-associated binding protein 1	2,61	chr4
GABBR1	2550	gamma-aminobutyric acid (GABA) B receptor, 1	2,10	chr6
GABPB2	2553	GA binding protein transcription factor, beta subunit 2	3,21	chr15
GABRB3	2562	gamma-aminobutyric acid (GABA) A receptor, beta 3	100,50	chr15
GABRB3	1653 /// 2562	Gamma-aminobutyric acid (GABA) A receptor, beta 3 /// DEAD (Asp-Glu-Ala-Asp	55,60	chr15
GADD45GIP1	90480	growth arrest and DNA-damage-inducible, gamma interacting protein 1	2,63	chr19
GAJ	84057	GAJ protein	13,42	chr4
GAL	51083	galanin	53,56	chr11
GALNAC4S-6	51363	B cell RAG associated protein	9,57	chr10
GALNT12	79695	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransfe	13,20	chr9
GALNT13	114805	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransfe	3,78	chr2
GALNT3	2591	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransfe	12,62	chr2
GAP43	2596	growth associated protein 43	12,36	chr3
GAPDHS	26330	Glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	4,10	chr19
GARNL1	253959	GTPase activating Rap/RanGAP domain-like 1	2,76	chr9
GARNL4	23108	GTPase activating Rap/RanGAP domain-like 4	4,66	chr17
GART	2618	Phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synth	5,03	chr21
GATAD1	57798	GATA zinc finger domain containing 1	2,02	chr7
GATAD2A	54815	GATA zinc finger domain containing 2A	2,63	chr19
GATAD2B	57459	GATA zinc finger domain containing 2B	2,09	chr1
GATM	2628	glycine amidinotransferase (L-arginine:glycine amidinotransferase)	3,72	chr15
GBA2	57704	Glucosidase, beta (bile acid) 2	3,20	chr9
GCA	25801	grancalcin, EF-hand calcium binding protein /// grancalcin, EF-hand calcium binc	9,28	chr2
GCDH	2639	glutaryl-Coenzyme A dehydrogenase	2,72	chr19
GCH1	2643	GTP cyclohydrolase 1 (dopa-responsive dystonia)	3,95	chr14
GCHFR	2644	GTP cyclohydrolase I feedback regulator	3,42	chr15
GCL	64395	Germ cell-less homolog 1 (Drosophila)	2,43	chr2
GCLC	2729	glutamate-cysteine ligase, catalytic subunit	4,53	chr6
GCNT1	2650	glucosaminyl (N-acetyl) transferase 1, core 2 (beta-1,6-N-acetylglucosaminyltran	2,73	chr9
GCNT2	2651	glucosaminyl (N-acetyl) transferase 2, I-branching enzyme	51,06	chr6
GCSH	2653	glycine cleavage system protein H (aminomethyl carrier)	4,63	chr5
GDAP1	54332	Ganglioside-induced differentiation-associated protein 1	10,97	chr8

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GDAP1L1	78997	ganglioside-induced differentiation-associated protein 1-like 1	2,36	chr20
GDF1	10715 /// 2657	growth differentiation factor 1 /// LAG1 longevity assurance homolog 1 (S. cerevi	2,46	chr19
GDF3	9573	growth differentiation factor 3	20,30	chr12
GDPD2	54857	glycerophosphodiester phosphodiesterase domain containing 2	2,16	chrX
GEMIN4	50628	gem (nuclear organelle) associated protein 4	4,30	chr17
GEMIN5	25929	gem (nuclear organelle) associated protein 5	3,99	chr5
GEMIN6	79833	gem (nuclear organelle) associated protein 6	3,29	chr2
GEMIN7	79760	gem (nuclear organelle) associated protein 7	2,17	chr19
GGA2	23062	golgi associated, gamma adaptin ear containing, ARF binding protein 2	5,26	chr16
GGA3	23163	golgi associated, gamma adaptin ear containing, ARF binding protein 3	3,07	chr17
GGT1	2678	gamma-glutamyltransferase 1	3,51	chr22
GIYD2	548593 /// 79008	GIY-YIG domain containing 2 /// GIY-YIG domain containing 1	2,03	chr16
GJA7	10052	gap junction protein, alpha 7, 45kDa (connexin 45)	3,90	chr17
GK001	57003	GK001 protein	2,95	chr17
GKAP1	80318	G kinase anchoring protein 1	3,42	chr9
GLCCI1	113263	glucocorticoid induced transcript 1	3,81	chr7
GLDC	2731	glycine dehydrogenase (decarboxylating; glycine decarboxylase, glycine cleavag	87,67	chr4
GLI2	2736	GLI-Kruppel family member GLI2	3,07	chr2
GLMN	11146	glomulin, FKBP associated protein	4,11	chr1
GLOXD1	84842	glyoxalase domain containing 1	6,83	chr1
GLS2	27165	glutaminase 2 (liver, mitochondrial)	4,33	chr12
GLTSCR2	29997	glioma tumor suppressor candidate region gene 2	3,40	chr19
GLUL	2752	glutamate-ammonia ligase (glutamine synthetase)	4,30	chr1
GLYATL1	92292	glycine-N-acyltransferase-like 1	2,12	chr11
GMCL1	64395	Germ cell-less homolog 1 (Drosophila)	3,18	chr2
GMDS	2762	GDP-mannose 4,6-dehydratase	2,73	chr6
GMEB1	10691	glucocorticoid modulatory element binding protein 1	2,84	chr1
GMNN	51053	geminin, DNA replication inhibitor	5,59	chr6
GMPS	8833	Guanine monphosphate synthetase	2,47	chr3
GNAL	2774	guanine nucleotide binding protein (G protein), alpha activating activity polypepti	2,61	chr18
GNAS	2778	GNAS complex locus	6,61	chr20
GNB2L1	10399	Guanine nucleotide binding protein (G protein), beta polypeptide 2-like 1	2,90	chr5
GNG4	2786	guanine nucleotide binding protein (G protein), gamma 4	3,72	chr1
GNL3	26354	guanine nucleotide binding protein-like 3 (nucleolar)	2,91	chr3
GNPDA1	10007	glucosamine-6-phosphate deaminase 1	3,66	chr5
GOLGA1	2800	Golgi autoantigen, golgin subfamily a, 1	2,49	chr9
GON4	54856	gon-4 homolog (C.elegans)	2,10	chr1
GPAM	57678	glycerol-3-phosphate acyltransferase, mitochondrial	2,38	chr10
GPATC2	55105	G patch domain containing 2	2,19	chr1
GPATC4	54865	G patch domain containing 4	4,91	chr1
GPBP1	65056	GC-rich promoter binding protein 1	3,62	chr5
GPBP1L1	60313	GC-rich promoter binding protein 1-like 1	2,17	chr1
GPC2	221914	glypican 2 (cerebroglycan)	2,14	chr7
GPC3	2719	glypican 3	4,73	chrX
GPC4	2239	glypican 4	52,71	chrX
GPD2	2820	glycerol-3-phosphate dehydrogenase 2 (mitochondrial)	2,36	chr2
GPIAP1	4076	GPI-anchored membrane protein 1	3,24	chr11
GPM6B	2824	glycoprotein M6B	63,43	chrX
GPR125	166647	G protein-coupled receptor 125	3,73	chr1
GPR143	4935	G protein-coupled receptor 143	9,16	chrX
GPR160	26996	G protein-coupled receptor 160	34,21	chr3
GPR19	2842	G protein-coupled receptor 19	28,34	chr12
GPR23	2846	G protein-coupled receptor 23	3,28	chrX
GPR27	2850	G protein-coupled receptor 27	35,07	chr3
GPR37	2861	G protein-coupled receptor 37 (endothelin receptor type B-like)	2,86	chr7
GPR51	9568	G protein-coupled receptor 51	2,04	chr9
GPR54	84634	G protein-coupled receptor 54	5,37	chr19
GPR63	81491	G protein-coupled receptor 63 /// G protein-coupled receptor 63	2,10	chr6
GPR64	10149	G protein-coupled receptor 64	24,81	chrX
GPRASP2	114928	G protein-coupled receptor associated sorting protein 2	2,45	chrX
GPRC5B	51704	G protein-coupled receptor, family C, group 5, member B	55,30	chr16
GPSN2	9524	glycoprotein, synaptic 2	2,38	chr19
GPX3	2878	glutathione peroxidase 3 (plasma)	4,57	chr5
GRB10	2887	growth factor receptor-bound protein 10	3,18	chr7
GRB14	2888	growth factor receptor-bound protein 14	5,66	chr2
GREB1	9687	GREB1 protein	2,61	chr2
GRHL1	29841	grainyhead-like 1 (Drosophila)	3,76	chr2

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GRHL2	79977	grainyhead-like 2 (Drosophila)	3,35	chr8
GRIPAP1	56850	GRIP1 associated protein 1	2,13	chrX
GRPEL2	134266	GrpE-like 2, mitochondrial (E. coli)	2,57	chr5
GRSF1	2926	G-rich RNA sequence binding factor 1	2,08	chr4
GRTP1	79774	Growth hormone regulated TBC protein 1	32,25	chr13
GRWD1	83743	glutamate-rich WD repeat containing 1	2,91	chr19
GSDMDC1	79792	gasdermin domain containing 1	2,70	chr8
GSG2	83903	germ cell associated 2 (haspin)	2,20	chr17
GSPT1	2935	G1 to S phase transition 1	2,51	chr16
GSPT2	23708	G1 to S phase transition 2 /// G1 to S phase transition 2	2,71	chrX
GSR	2936	glutathione reductase	2,04	chr8
GSTO2	119391	glutathione S-transferase omega 2	10,16	chr10
GSTP1	2950	glutathione S-transferase pi	2,42	chr11
GSTT1	2952	Glutathione S-transferase theta 1	2,55	chr22
GSTZ1	2954	glutathione transferase zeta 1 (maleylacetoacetate isomerase)	3,45	chr14
GTF2E1	2960	general transcription factor IIE, polypeptide 1, alpha 56kDa	3,49	chr3
GTF2H2	2966	general transcription factor IIH, polypeptide 2, 44kDa	4,18	chr5
GTF2H4	2968	general transcription factor IIH, polypeptide 4, 52kDa	4,38	chr6
GTF3A	2971	general transcription factor IIIA	2,66	chr13
GTF3C1	2975	general transcription factor IIIC, polypeptide 1, alpha 220kDa	2,41	chr16
GTF3C2	2976	general transcription factor IIIC, polypeptide 2, beta 110kDa	3,32	chr2
GTF3C4	9329	general transcription factor IIIC, polypeptide 4, 90kDa	2,54	chr9
GTF3C5	9328	general transcription factor IIIC, polypeptide 5, 63kDa	2,76	chr9
GTPBP1	9567	GTP binding protein 1	2,75	chr22
GTPBP6	8225	GTP binding protein 6 (putative)	2,39	chrX_random
GTPBP7	92170	GTP-binding protein 7	3,63	chr10
GTSE1	51512	G-2 and S-phase expressed 1	4,60	chr22
GTSE1	440834 /// 51512	G-2 and S-phase expressed 1 /// hypothetical gene supported by BC069212	2,15	chr22
GUCA1A	2978	guanylate cyclase activator 1A (retina)	17,64	chr6
GULP1	51454	GULP, engulfment adaptor PTB domain containing 1	3,94	chr2
GUSB	2990	glucuronidase, beta	2,09	chr7
GYG2	8908	glycogenin 2	9,77	chrX
GYLTL1B	120071	glycosyltransferase-like 1B	5,12	chr11
H17	55572	hypothetical protein H17	3,97	chr11
H1F0	3005	H1 histone family, member 0	2,54	chr22
H1FX	8971	H1 histone family, member X	2,50	chr3
H2AFV	94239	H2A histone family, member V	2,01	chr7
H2AFX	3014	H2A histone family, member X	7,02	chr11
H3F3A	3020	H3 histone, family 3A	2,68	chr1
H3F3A	3020 /// 440926	H3 histone, family 3A /// H3 histone, family 3A pseudogene	4,78	chr2
HA-1	23526	minor histocompatibility antigen HA-1	16,31	chr19
HADH2	3028	hydroxyacyl-Coenzyme A dehydrogenase, type II	2,20	chrX
HADHSC	3033	L-3-hydroxyacyl-Coenzyme A dehydrogenase, short chain	2,10	chr4
HAS2	3037	hyaluronan synthase 2	13,06	chr8
HAS3	3038	hyaluronan synthase 3	6,93	chr16
HAT1	8520	histone acetyltransferase 1	2,36	chr2
HBII-276HG	641638	HBII-276 host gene	2,33	chr8
HBII-437 /// HB	38427 /// 347686	HBII-437 C/D box snoRNA /// HBII-13 snoRNA	6,22	chr15
HBLD1	122961	HESB like domain containing 1	2,22	chr14
HBLD2	81689	HESB like domain containing 2	3,00	chr1
HBXAP	51773	hepatitis B virus x associated protein	2,27	chr11
hCAP-D3	23310	KIAA0056 protein	3,31	chr11
HCAP-G	64151	chromosome condensation protein G	6,93	chr4
hCAP-H2	29781	kleisin beta	2,98	chr22
HCG12	493826	HLA complex group 12	3,24	chr6
HCG18	414777	HLA complex group 18	2,34	chr6
HCNGP	29115	transcriptional regulator protein	2,16	chr17
HCRP1	387535	hepatocellular carcinoma-related HCRP1	2,38	chr6
HD	3064	huntingtin (Huntington disease)	2,24	chr4
HDAC1	3065	histone deacetylase 1	2,74	chr1
HDAC2	3066	Histone deacetylase 2	3,07	chr6
HDAC3	8841	histone deacetylase 3	2,19	chr5
HDAC4	9759	histone deacetylase 4	2,62	chr2
HDAC5	10014	histone deacetylase 5	3,52	chr17
HDAC8	55869	histone deacetylase 8	2,43	chrX
HDCMA18P	51574	HDCMA18P protein	201,71	chr4
HDDC2	51020	HD domain containing 2	2,69	chr6

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HDGF	3068	hepatoma-derived growth factor (high-mobility group protein 1-like)	2,03	chr1
HDHD1A	8226	haloacid dehalogenase-like hydrolase domain containing 1A	2,01	chrX
HDHD2	84064	haloacid dehalogenase-like hydrolase domain containing 2	3,02	chr18
HEATR1	55127	HEAT repeat containing 1	3,73	chr1
HELLS	3070	helicase, lymphoid-specific	22,76	chr10
HERC5	51191	hect domain and RLD 5	24,83	chr4
HERC6	55008	hect domain and RLD 6	3,91	chr4
HES6	55502	hairy and enhancer of split 6 (Drosophila)	5,65	chr2
HESX1	8820	homeo box (expressed in ES cells) 1	2,43	chr3
HEXIM2	124790	hexamthylene bis-acetamide inducible 2	2,78	chr17
HEY2	23493	hairy/enhancer-of-split related with YRPW motif 2	13,03	chr6
HIATL2	84278	hippocampus abundant gene transcript-like 2	2,05	chr9
HIC2	23119	hypermethylated in cancer 2	7,88	chr22
HIG2	29923	hypoxia-inducible protein 2	3,72	chr7
HINT2	84681	histidine triad nucleotide binding protein 2 /// histidine triad nucleotide binding pro	2,27	chr9
HIP1	3092	Huntingtin interacting protein 1	4,66	chr7
HIP2	3093	Huntingtin interacting protein 2	4,67	chr4
HIRIP3	8479	HIRA interacting protein 3	2,75	chr16
HIST1H1A	3024	histone 1, H1a	9,81	chr6
HIST1H1C	3006	histone 1, H1c	2,82	chr6
HIST1H1D	3007	histone 1, H1d	3,23	chr6
HIST1H4K	8362 /// 8363	histone 1, H4k /// histone 1, H4j	4,42	chr6
HIST2H4	8370	Histone H4/o	3,09	chr1
HIST3H2A	92815	histone 3, H2a	2,39	chr1
HK1	3098	hexokinase 1	2,02	chr10
HK2	3099	hexokinase 2	3,51	chr2
HKE2	10471	HLA class II region expressed gene KE2	2,41	chr6
HLA-DOA	3111	major histocompatibility complex, class II, DO alpha	5,15	chr6
HLA-DPA1	3113	major histocompatibility complex, class II, DP alpha 1	2,60	chr6
HLA-DPB1	3115	major histocompatibility complex, class II, DP beta 1	2,74	chr6
HLA-DPB2	3116	major histocompatibility complex, class II, DP beta 2 (pseudogene)	102,72	chr6
HLA-DRB1	3123	major histocompatibility complex, class II, DR beta 1 /// major histocompatibility c	4,43	chr6_hla_hap1
HLC-8	55028	lung cancer-related protein 8	2,29	chr17
HLRC1	83475	HEAT-like (PBS lyase) repeat containing 1 /// HEAT-like (PBS lyase) repeat cont	4,51	chr19
HMBS	3145	hydroxymethylbilane synthase	3,70	chr11
HMG4L	128872	high-mobility group (nonhistone chromosomal) protein 4-like	4,88	chrX
HMGA1	3159	high mobility group AT-hook 1	4,94	chr6
HMGB1	3146	high-mobility group box 1	4,12	chr15
HMGB1	10357 /// 3146	high-mobility group box 1 /// high-mobility group (nonhistone chromosomal) prote	2,77	chr3
HMGB2	3148	high-mobility group box 2	2,31	chr4
HMGB3	3149	high-mobility group box 3	10,93	chr1
HMGCR	3156	3-hydroxy-3-methylglutaryl-Coenzyme A reductase	3,67	chr5
HMGCS1	3157	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1 (soluble)	3,51	chr5
HMGN3	9324	high mobility group nucleosomal binding domain 3	4,02	chr6
HMMR	3161	hyaluronan-mediated motility receptor (RHAMM)	9,71	chr5
HN1	51155	hematological and neurological expressed 1	2,97	chr17
HNRPA0	10949	Heterogeneous nuclear ribonucleoprotein A0	2,65	chr5
HNRPA1	3178	heterogeneous nuclear ribonucleoprotein A1	4,63	chr12
HNRPA1	6 /// 389674 /// 39	heterogeneous nuclear ribonucleoprotein A1 /// similar to Hnrpa1 protein /// simil	2,11	chr5
HNRPA2B1	3181	heterogeneous nuclear ribonucleoprotein A2/B1	2,61	chr7
HNRPA3	220988	heterogeneous nuclear ribonucleoprotein A3	3,44	chr2
HNRPAB	3182	heterogeneous nuclear ribonucleoprotein A/B	2,84	chr5
HNRPC	3183	heterogeneous nuclear ribonucleoprotein C (C1/C2)	2,84	chr14
HNRPD	3184	Heterogeneous nuclear ribonucleoprotein D (AU-rich element RNA binding prote	5,95	chr4
HNRPDL	9987	heterogeneous nuclear ribonucleoprotein D-like	3,45	chr4
HNRPF	3185	heterogeneous nuclear ribonucleoprotein F	4,97	chr10
HNRPH1	3187	heterogeneous nuclear ribonucleoprotein H1 (H)	3,35	chr5
HNRPH3	3189	heterogeneous nuclear ribonucleoprotein H3 (2H9)	3,60	chr10
HNRPK	3190	heterogeneous nuclear ribonucleoprotein K	2,13	chr3
HNRPM	4670	Heterogeneous nuclear ribonucleoprotein M	5,58	chr19
HNRPU	3192	heterogeneous nuclear ribonucleoprotein U (scaffold attachment factor A)	5,69	chr1
HOMER1	9456	homer homolog 1 (Drosophila)	5,12	chr5
HOOK1	51361	Hook homolog 1 (Drosophila)	24,88	chr1
HOOK2	29911	hook homolog 2 (Drosophila)	2,68	chr19
HOXA7	3204	homeo box A7	5,12	chr1
HPCL2	26061	2-hydroxyphytanoyl-CoA lyase	5,99	chr3
HPRT1	3251	hypoxanthine phosphoribosyltransferase 1 (Lesch-Nyhan syndrome)	2,88	chrX

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HPS3	84343	Hermansky-Pudlak syndrome 3	3,72	chr3
HRASLS	57110	HRAS-like suppressor	2,33	chr3
HRASLS3	11145	HRAS-like suppressor 3	61,46	chr11
HRB	3267	HIV-1 Rev binding protein	3,15	chr2
HRB2	11103	HIV-1 rev binding protein 2	2,28	chr12
HRLP5	117245	H-rev107-like protein 5	3,96	chr11
HRMT1L3	10196	HMT1 hnRNP methyltransferase-like 3 (S. cerevisiae)	2,39	chr11
HRMT1L6	55170	HMT1 hnRNP methyltransferase-like 6 (S. cerevisiae)	4,19	chr1
HRSP12	10247	heat-responsive protein 12	3,92	chr8
HS3ST4	9951	heparan sulfate (glucosamine) 3-O-sulfotransferase 4	3,19	chr16
HS6ST1	9394	heparan sulfate 6-O-sulfotransferase 1	2,30	chr1
HS6ST2	90161	heparan sulfate 6-O-sulfotransferase 2	5,56	chrX
HSCARG	57407	HSCARG protein	2,02	chr16
HSD11B2	3291	hydroxysteroid (11-beta) dehydrogenase 2	2,05	chr16
HSD17B4	3295	hydroxysteroid (17-beta) dehydrogenase 4	6,62	chr5
HSD17B7	51478	hydroxysteroid (17-beta) dehydrogenase 7	3,01	chr1
HSD17B8	7923	hydroxysteroid (17-beta) dehydrogenase 8	2,46	chr6
HSDL1	83693	hydroxysteroid dehydrogenase like 1	2,44	chr16
HSGT1	11319	suppressor of S. cerevisiae gcr2	2,06	chr10
HSPA14	51182	heat shock 70kDa protein 14	4,39	chr10
HSPA2	3306	heat shock 70kDa protein 2	21,71	chr14
HSPA4	3308	Heat shock 70kDa protein 4	6,93	chr5
HSPA8	3312	heat shock 70kDa protein 8	2,23	chr3
HSPA9B	3313	heat shock 70kDa protein 9B (mortalin-2)	2,34	chr2
HSPBAP1	79663	HSPB (heat shock 27kDa) associated protein 1	2,50	chr3
HSPC009	28958	HSPC009 protein	2,81	chr17
HSPC065	29070	HSPC065 protein	2,38	chr16
HSPC111	51491	hypothetical protein HSPC111	5,41	chr5
HSPC121	51495	butyrate-induced transcript 1	3,15	chr15
HSPC128	29080	HSPC128 protein	2,71	chr12
HSPC138	51501	hypothetical protein HSPC138	2,07	chr11
HSPC159	29094	HSPC159 protein	3,29	chr2
HSPC176	51693	hematopoietic stem/progenitor cells 176	2,99	chr16
HSPCB	3326	heat shock 90kDa protein 1, beta	4,16	chr6
HSPD1	3329	heat shock 60kDa protein 1 (chaperonin)	6,10	chr5
HSPE1	3336	heat shock 10kDa protein 1 (chaperonin 10)	4,12	chr2
HSPH1	10808	Heat shock 105kDa/110kDa protein 1	2,38	chr13
HSUP1	441951	Similar to RPE-spondin	6,50	chr20
HT007	55863	uncharacterized hypothalamus protein HT007	2,49	chr11
HTATIP2	10553	HIV-1 Tat interactive protein 2, 30kDa	2,93	chr11
HUNK	30811	hormonally upregulated Neu-associated kinase	4,91	chr21
HUWE1	10075	HECT, UBA and WWE domain containing 1	2,40	chrX
HYLS1	219844	hydrolethalus syndrome 1	7,07	chr11
ICA1	3382	islet cell autoantigen 1, 69kDa	5,70	chr7
ICT1	3396	immature colon carcinoma transcript 1	2,85	chr17
ID1	3397	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	5,59	chr20
IDE	3416	insulin-degrading enzyme	2,75	chr10
IDH1	3417	isocitrate dehydrogenase 1 (NADP+), soluble	4,73	chr2
IDH3B	3420	isocitrate dehydrogenase 3 (NAD+) beta	2,73	chr20
IER2	9592	immediate early response 2	2,99	chr19
IFI30	10437	interferon, gamma-inducible protein 30	4,77	chr19
IFITM1	8519	interferon induced transmembrane protein 1 (9-27)	10,86	chr11
IGBP1	3476	Immunoglobulin (CD79A) binding protein 1	2,16	chrX
IGFBPL1	347252	Insulin-like growth factor binding protein-like 1	17,18	chr9
IGSF1	3547	immunoglobulin superfamily, member 1	4,90	chrX
IGSF3	3321	immunoglobulin superfamily, member 3	25,76	chr1
IGSF4D	253559	immunoglobulin superfamily, member 4D	2,05	chr3
IGSF9	57549	immunoglobulin superfamily, member 9	2,96	chr1
IHPK2	51447	inositol hexaphosphate kinase 2	2,19	chr3
IIP45	60672	invasion inhibitory protein 45	2,75	chr1
IL17RB	55540	interleukin 17 receptor B	2,37	chr3
IL17RD	54756	Interleukin 17 receptor D	27,55	chr3
IL19	29949	Interleukin 19	4,99	chr17
ILF2	3608	interleukin enhancer binding factor 2, 45kDa /// interleukin enhancer binding fact	2,26	chr1
ILF3	3609	interleukin enhancer binding factor 3, 90kDa	5,98	chr19
IMMP1L	196294	IMP1 inner mitochondrial membrane peptidase-like (S. cerevisiae)	2,58	chr11
IMP-1	10642	IGF-II mRNA-binding protein 1	5,86	chr17

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IMP3	55272	IMP3, U3 small nucleolar ribonucleoprotein, homolog (yeast)	**6,06**	chr15
IMP-3	10643	IGF-II mRNA-binding protein 3	**2,85**	chr7
IMPA2	3613	inositol(myo)-1(or 4)-monophosphatase 2	**23,92**	chr18
IMPACT	55364	hypothetical protein IMPACT	**2,30**	chr18
IMPDH2	3615	IMP (inosine monophosphate) dehydrogenase 2	**2,59**	chr3
INADL	10207	InaD-like (Drosophila)	**11,47**	chr1
INCENP	3619	Inner centromere protein antigens 135/155kDa	**5,59**	chr11
INDO	3620	indoleamine-pyrrole 2,3 dioxygenase	**29,10**	chr8
ING1	3621	inhibitor of growth family, member 1	**3,46**	chr13
ING2	3622	inhibitor of growth family, member 2	**2,03**	chr4
ING3	54556	inhibitor of growth family, member 3	**2,98**	chr7
ING5	84289	inhibitor of growth family, member 5	**5,27**	chr2_random
INSR	3643	Insulin receptor	**8,58**	chr19
IPO11	51194	importin 11	**3,60**	chr5
IPO4	79711	importin 4	**2,07**	chr14
IPO9	55705	Importin 9	**2,28**	chr1
IPW	3653	imprinted in Prader-Willi syndrome	**6,14**	chr15
IQCA	79781	IQ motif containing with AAA domain	**3,32**	chr2
IQCB1	9657	IQ motif containing B1	**4,18**	chr3
IQGAP2	10788	IQ motif containing GTPase activating protein 2	**24,54**	chr5
IQGAP3	128239	IQ motif containing GTPase activating protein 3	**3,77**	chr1
IRAK1BP1	134728	Interleukin-1 receptor-associated kinase 1 binding protein 1	**3,80**	chr6
IRF3	3661	interferon regulatory factor 3	**2,23**	chr19
IRF6	3664	interferon regulatory factor 6	**3,51**	chr1
IRS4	8471	Insulin receptor substrate 4	**10,72**	chrX
IRX2	153572	iroquois homeobox protein 2	**9,14**	chr5
ISG20L1	64782	interferon stimulated exonuclease gene 20kDa-like 1	**2,26**	chr15
ISG20L2	81875	interferon stimulated exonuclease gene 20kDa-like 2 /// interferon stimulated exo	**2,01**	chr1
ISOC2	79763	isochorismatase domain containing 2	**2,27**	chr19
ITGA6	3655	integrin, alpha 6	**2,95**	chr2
ITGA7	3679	integrin, alpha 7	**2,81**	chr12
ITGB1BP3	27231	integrin beta 1 binding protein 3	**11,03**	chr19
ITGB3BP	23421	integrin beta 3 binding protein (beta3-endonexin)	**5,26**	chr1
ITM2A	9452	integral membrane protein 2A	**13,10**	chrX
ITPK1	3705	inositol 1,3,4-triphosphate 5/6 kinase	**4,13**	chr14
ITPR3	3710	inositol 1,4,5-triphosphate receptor, type 3	**5,48**	chr6
ITSN1	6453	intersectin 1 (SH3 domain protein)	**3,13**	chr21
IVD	3712	isovaleryl Coenzyme A dehydrogenase	**2,40**	chr15
JARID1B	10765	Jumonji, AT rich interactive domain 1B (RBP2-like)	**2,69**	chr1
JARID2	3720	Jumonji, AT rich interactive domain 2	**26,09**	chr6
JMJD1B	51780	jumonji domain containing 1B	**2,34**	chr5
JMJD1C	221037	jumonji domain containing 1C	**4,75**	chr10
JMJD2A	9682	jumonji domain containing 2A	**2,44**	chr1
JMJD2C	23081	jumonji domain containing 2C	**2,37**	chr9
JMY	133746	junction-mediating and regulatory protein	**3,10**	chr5
JPH1	56704	junctophilin 1	**10,69**	chr8
JPH3	57338	junctophilin 3	**6,67**	chr16
JPH4	84502	junctophilin 4	**2,42**	chr14
JTV1	7965	JTV1 gene	**2,53**	chr7
KAL1	3730	Kallmann syndrome 1 sequence	**3,97**	chrX
KARCA1	126823	kelch/ankyrin repeat containing cyclin A1 interacting protein	**3,29**	chr1
KARS	3735	lysyl-tRNA synthetase /// lysyl-tRNA synthetase	**2,04**	chr16
KATNA1	11104	katanin p60 (ATPase-containing) subunit A 1	**2,07**	chr6
KATNB1	10300	katanin p80 (WD repeat containing) subunit B 1	**2,17**	chr16
KBTBD7	84078	kelch repeat and BTB (POZ) domain containing 7	**4,09**	chr13
KBTBD8	84541	kelch repeat and BTB (POZ) domain containing 8	**4,79**	chr3
KCND2	3751	potassium voltage-gated channel, Shal-related subfamily, member 2	**2,55**	chr7
KCNG3	170850	potassium voltage-gated channel, subfamily G, member 3	**22,68**	chr2
KCNK12	56660	potassium channel, subfamily K, member 12	**3,70**	chr2
KCNK5	8645	potassium channel, subfamily K, member 5	**8,47**	chr6
KCNMB4	27345	potassium large conductance calcium-activated channel, subfamily M, beta mem	**2,83**	chr12
KCNN2	3781	potassium intermediate/small conductance calcium-activated channel, subfamily	**7,20**	chr5
KCNQ2	3785	potassium voltage-gated channel, KQT-like subfamily, member 2	**18,62**	chr20
KCNS3	3790	potassium voltage-gated channel, delayed-rectifier, subfamily S, member 3	**19,35**	chr2
KCTD14	65987	potassium channel tetramerisation domain containing 14	**7,80**	chr11
KCTD2	23510	potassium channel tetramerisation domain containing 2	**2,99**	chr17
KCTD6	200845	potassium channel tetramerisation domain containing 6	**2,03**	chr3

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KDR	3791	kinase insert domain receptor (a type III receptor tyrosine kinase)	**10,56**	chr4
KEAP1	9817	kelch-like ECH-associated protein 1	**2,46**	chr19
KHDRBS1	10657	KH domain containing, RNA binding, signal transduction associated 1	**2,40**	chr1
KHK	3795	ketohexokinase (fructokinase) /// ketohexokinase (fructokinase)	**6,22**	chr2
KIAA0020	9933	KIAA0020	**2,32**	chr9
KIAA0114	57291	KIAA0114 gene product	**11,39**	chr4
KIAA0133	9816	KIAA0133	**5,15**	chr1
KIAA0152	9761	KIAA0152	**2,58**	chr12
KIAA0153	23170	KIAA0153 protein	**5,73**	chr22
KIAA0179	23076	KIAA0179	**2,58**	chr21
KIAA0182	23199	KIAA0182 protein	**5,08**	chr16
KIAA0286	23306	KIAA0286 protein	**6,45**	chr12
KIAA0368	23392	KIAA0368	**3,18**	chr9
KIAA0391	9692	KIAA0391	**2,36**	chr14
KIAA0406	9675	KIAA0406 gene product	**3,70**	chr20
KIAA0495	57212	KIAA0495	**2,38**	chr1
KIAA0523	23302	KIAA0523 protein	**13,63**	chr17
KIAA0528	9847	KIAA0528 gene product	**4,33**	chr12
KIAA0555	9832	Jak and microtubule interacting protein 2	**4,25**	chr5
KIAA0582	23177	KIAA0582	**3,47**	chr2
KIAA0649	9858	KIAA0649	**2,69**	chr9
KIAA0664	23277	KIAA0664 protein	**2,15**	chr17
KIAA0672	9912	KIAA0672 gene product	**4,34**	chr17
KIAA0683	9894	KIAA0683 gene product	**2,91**	chr16
KIAA0828	23382	KIAA0828 protein	**2,44**	chr7
KIAA0841	23354	KIAA0841	**2,08**	chr19
KIAA0859	51603	KIAA0859	**3,68**	chr1
KIAA0863	22850	KIAA0863 protein	**4,60**	chr18
KIAA0888	26049	KIAA0888 protein	**18,52**	chr5
KIAA0922	23240	KIAA0922 protein	**2,39**	chr4
KIAA0947	23379	KIAA0947 protein	**2,27**	chr5
KIAA0971	22868	KIAA0971	**2,13**	chr2
KIAA0980	22981	KIAA0980 protein	**5,98**	chr20
KIAA0984	23329	KIAA0984 protein	**2,34**	chr12
KIAA0999	23387	KIAA0999 protein	**4,85**	chr11
KIAA1143	57456	KIAA1143	**3,22**	chr3
KIAA1155	400961	KIAA1155 protein	**6,94**	chr2
KIAA1166	55906	KIAA1166	**2,86**	chrX
KIAA1211	57482	KIAA1211 protein	**4,71**	chr4
KIAA1212	55704	KIAA1212	**4,35**	chr2
KIAA1219	57148	KIAA1219 protein	**2,03**	chr20
KIAA1240	54454	KIAA1240 protein	**2,65**	chr2
KIAA1244	57221	KIAA1244	**2,89**	chr6
KIAA1274	27143	KIAA1274	**3,71**	chr10
KIAA1287	57508	KIAA1287	**2,29**	chr17
KIAA1324L	222223	KIAA1324-like	**4,49**	chr7
KIAA1333	55632	KIAA1333	**3,51**	chr14
KIAA1344	57544	KIAA1344	**3,83**	chr14
KIAA1411	57579	KIAA1411	**2,94**	chr6
KIAA1467	57613	KIAA1467 protein	**4,04**	chr12
KIAA1509	440193	KIAA1509	**7,86**	chr14
KIAA1524	57650	KIAA1524	**4,73**	chr3
KIAA1533	57655	KIAA1533	**2,09**	chr19
KIAA1542	57661	CTD-binding SR-like protein rA9	**2,18**	chr11
KIAA1545	57666	KIAA1545 protein	**2,81**	chr12
KIAA1549	57670	KIAA1549 protein	**3,58**	chr7
KIAA1553	57673	KIAA1553	**13,35**	chr6
KIAA1586	57691	KIAA1586	**2,27**	chr6
KIAA1598	57698	KIAA1598	**2,37**	chr10
KIAA1604	57703	KIAA1604 protein	**2,89**	chr2
KIAA1627	57721	KIAA1627 protein	**2,07**	chr4
KIAA1648	284900	KIAA1648 protein	**5,53**	chr22
KIAA1671	85379	KIAA1671 protein	**7,72**	chr22
KIAA1718	80853	KIAA1718 protein	**2,77**	chr7
KIAA1727	85462	KIAA1727 protein	**8,07**	chr4
KIAA1731	85459	KIAA1731	**2,26**	chr11
KIAA1737	85457	KIAA1737	**2,77**	chr14

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KIAA1754L	150771	KIAA1754-like	2,53	chr2
KIAA1804	84451	mixed lineage kinase 4	22,07	chr1
KIAA1815	79956	KIAA1815	3,86	chr9
KIAA1906	114795	KIAA1906 protein	7,00	chr12
KIAA1909	153478	KIAA1909 protein	6,79	chr5
KIAA1935	114825	KIAA1935 protein	6,69	chr5
KIAA1944	121256	KIAA1944 protein	2,84	chr12
KIAA1958	158405	KIAA1958	18,10	chr9
KIAA1970	124454	KIAA1970 protein	3,99	chr16
KIAA1982	170960	KIAA1982 protein	5,40	chr4
KIAA2010	55671	KIAA2010	2,17	chr14
KIBRA	23286	KIBRA protein	4,01	chr5
KIF11	3832	kinesin family member 11	6,99	chr10
KIF14	9928	kinesin family member 14	7,32	chr1
KIF15	56992	kinesin family member 15	11,53	chr3
KIF18A	81930	kinesin family member 18A /// kinesin family member 18A	2,36	chr11
KIF1A	547	kinesin family member 1A	40,11	chr2
KIF1B	23095	kinesin family member 1B	5,00	chr1
KIF20A	10112	kinesin family member 20A	8,23	chr5
KIF21A	55605	kinesin family member 21A	6,33	chr12
KIF22	3835	kinesin family member 22	10,39	chr16
KIF23	9493	kinesin family member 23	3,68	chr15
KIF26A	26153	kinesin family member 26A	4,00	chr14
KIF2C	11004	kinesin family member 2C	6,72	chr1
KIF4A	24137	kinesin family member 4A	5,74	chr5
KIF5A	3798	Kinesin family member 5A	18,02	chr12
KIF5C	3800	Kinesin family member 5C	147,77	chr2
KIF9	64147	kinesin family member 9	2,26	chr3
KIFC1	3833	kinesin family member C1	2,87	chr6
KIT	3815	v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog	12,41	chr4
KLF4	9314	Kruppel-like factor 4 (gut)	6,08	chr9
KLF8	11279	Kruppel-like factor 8	6,52	chrX
KLHDC4	54758	kelch domain containing 4	2,57	chr16
KLHL12	59349	kelch-like 12 (Drosophila)	2,08	chr22
KLHL13	90293	kelch-like 13 (Drosophila)	3,96	chrX
KLHL23	151230	kelch-like 23 (Drosophila)	8,07	chr2
KLHL3	26249	kelch-like 3 (Drosophila)	4,86	chr5
KLHL7	55975	kelch-like 7 (Drosophila)	7,93	chr7
KLKB1	3818	kallikrein B, plasma (Fletcher factor) 1	10,84	chr4
KNTC1	9735	kinetochore associated 1	6,70	chr12
KNTC2	10403	kinetochore associated 2	6,21	chr18
KPNA2	3838	karyopherin alpha 2 (RAG cohort 1, importin alpha 1) /// karyopherin alpha 2 (RA	2,94	chr17
KPNA3	3839	Karyopherin alpha 3 (importin alpha 4)	2,83	chr13
KPNA5	3841	Karyopherin alpha 5 (importin alpha 6)	2,01	chr6
KPNB1	3837	Karyopherin (importin) beta 1	2,02	chr17
KPTN	11133	kaptin (actin binding protein)	3,41	chr19
KRTAP4-7	85287	keratin associated protein 4-7	5,40	chr15
KRTCAP3	200634	keratinocyte associated protein 3	11,82	chr2
KUB3	91419	Ku70-binding protein 3	2,86	chr12
L2HGDH	79944	L-2-hydroxyglutarate dehydrogenase	3,06	chr14
LACTB2	51110	lactamase, beta 2	2,05	chr8
LAMA1	284217	laminin, alpha 1	21,06	chr18
LAMC3	10319	laminin, gamma 3	2,39	chr9
LANCL2	55915	LanC lantibiotic synthetase component C-like 2 (bacterial)	2,39	chr7
LAPTM4B	55353	lysosomal associated protein transmembrane 4 beta	6,03	chr8
LARP2	55132	La ribonucleoprotein domain family, member 2	3,81	chr4
LARP4	113251	La ribonucleoprotein domain family, member 4	2,34	chr12
LARP5	23185	La ribonucleoprotein domain family, member 5	2,44	chr10
LARS	51520	leucyl-tRNA synthetase	2,62	chr5
LARS2	23395	leucyl-tRNA synthetase 2, mitochondrial	4,24	chr3
LAS1L	81887	LAS1-like (S. cerevisiae) /// LAS1-like (S. cerevisiae)	4,72	chrX
LASS1	10715	LAG1 longevity assurance homolog 1 (S. cerevisiae)	2,87	chr19
LASS4	79603	LAG1 longevity assurance homolog 4 (S. cerevisiae)	2,08	chr19
LASS6	253782	LAG1 longevity assurance homolog 6 (S. cerevisiae)	3,09	chr2
LBR	3930	lamin B receptor	2,94	chr1
LCHN	57189	LCHN protein	3,72	chr7
LCK	3932	lymphocyte-specific protein tyrosine kinase	37,69	chr1

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LCMT1	51451	leucine carboxyl methyltransferase 1	**2,60**	chr16
LCMT2	9836	leucine carboxyl methyltransferase 2	**2,40**	chr15
LDB2	9079	LIM domain binding 2	**3,82**	chr4
LECT1	11061	leukocyte cell derived chemotaxin 1	**46,66**	chr13
LEFTY1	10637	left-right determination factor 1	**70,89**	chr1
LEFTY2	7044	left-right determination factor 2	**38,07**	chr1
LEO1	123169	Leo1, Paf1/RNA polymerase II complex component, homolog (S. cerevisiae)	**2,26**	chr15
LGALS1	3956	lectin, galactoside-binding, soluble, 1 (galectin 1)	**76,19**	chr22
LIAS	11019	lipoic acid synthetase	**3,79**	chr4
LIG1	3978	ligase I, DNA, ATP-dependent	**4,24**	chr19
LIG3	3980	ligase III, DNA, ATP-dependent	**4,17**	chr17
LIN28	79727	lin-28 homolog (C. elegans)	**660,24**	chr1
LIN28B	389421	lin-28 homolog B (C. elegans)	**143,10**	chr6
LIPT1	51601	lipoyltransferase 1	**3,03**	chr2
LISCH7	51599	liver-specific bHLH-Zip transcription factor	**6,93**	chr19
LITAF	9516	lipopolysaccharide-induced TNF factor	**2,75**	chr16
LLGL1	3996	lethal giant larvae homolog 1 (Drosophila)	**2,94**	chr17
LLGL2	3993	lethal giant larvae homolog 2 (Drosophila)	**3,55**	chr17
LMNB1	4001	lamin B1	**11,56**	chr5
LMNB2	84823	lamin B2	**2,48**	chr19
LMO4	8543	LIM domain only 4	**3,64**	chr1
LMTK2	22853	Lemur tyrosine kinase 2	**3,05**	chr7
LNX	84708	ligand of numb-protein X	**10,39**	chr4
LNX2	222484	ligand of numb-protein X 2	**2,10**	chr13
LOC112703	112703	hypothetical protein BC004941	**2,78**	chr19
LOC112869	112869	hypothetical protein BC011981	**2,56**	chr16
LOC113174	113174	hypothetical protein BC012010	**4,91**	chr11
LOC113179	113179	hypothetical protein BC011824	**2,58**	chr19
LOC114977	114977	hypothetical protein BC014148	**13,14**	chr19
LOC115648	115648	similar to hypothetical protein FLJ13659	**3,98**	chr19
LOC115648 /// 148203 /// 284443		similar to hypothetical protein FLJ13659 /// hypothetical protein LOC148203 /// zi	**4,02**	chr19
LOC116238	116238	hypothetical protein BC014072	**4,06**	chr17
LOC124491	124491	LOC124491	**5,42**	chr16
LOC126295	126295	hypothetical protein LOC126295	**5,31**	chr19
LOC129531	129531	hypothetical protein BC018453	**2,53**	chr2
LOC130502	130502	similar to CG14894-PA	**2,43**	chr2
LOC131076	131076	hypothetical LOC131076	**4,45**	chr18
LOC132241	132241	hypothetical protein LOC132241	**2,10**	chr3
LOC137886	137886	hypothetical protein LOC137886	**2,89**	chr8
LOC138255	138255	OTTHUMP00000021439	**60,20**	chr9
LOC139886	139886	hypothetical protein LOC139886	**3,39**	chrX
LOC145786	145786	hypothetical protein LOC145786	**6,72**	chr15
LOC146909	146909	hypothetical protein LOC146909	**4,51**	chr17
LOC147645	147645	hypothetical protein LOC147645	**3,91**	chr19
LOC147727	147727	hypothetical protein LOC147727	**2,56**	chr19
LOC148203	148203	hypothetical protein LOC148203	**10,72**	chr19
LOC149832	149832	Hypothetical protein LOC149832	**2,17**	chr20
LOC150084	150084	hypothetical protein LOC150084	**2,11**	chr21
LOC150271	150271	hypothetical protein LOC150271	**8,28**	chr22
LOC150371	150371	hypothetical LOC150371	**8,35**	chr22
LOC151194	151194	similar to hepatocellular carcinoma-associated antigen HCA557b	**10,84**	chr2
LOC152185	152185	hypothetical protein AY099107	**2,18**	chr3
LOC152217	152217	hypothetical protein BC007882	**2,77**	chr3
LOC152485	152485	Hypothetical protein LOC152485	**3,26**	chr4
LOC153346	153346	hypothetical protein LOC153346	**11,22**	chr5
LOC153469	153469	hypothetical protein LOC153469	**16,62**	chr5
LOC153546	153546	hypothetical protein LOC153546	**3,39**	chr5
LOC153561	153561	Hypothetical protein LOC153561	**11,34**	chr5
LOC157627	157627	hypothetical protein LOC157627	**9,48**	chr8
LOC159090	159090	similar to hypothetical protein MGC17347	**2,77**	chrX
LOC163233	163233	Similar to Zinc finger protein 93 (Zinc finger protein HTF34)	**4,03**	(vide)
LOC169834	169834	hypothetical protein LOC169834	**13,96**	chr9
LOC196394	196394	hypothetical protein LOC196394	**2,24**	chr12
LOC200169	200169	hypothetical protein LOC200169	**3,82**	chr1
LOC200230	200230	similar to KIAA0386	**2,22**	chr20
LOC201725	201725	hypothetical protein LOC201725	**2,82**	chr4
LOC202451	202451	hypothetical protein LOC202451	**9,64**	chr6

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LOC202781	202781	hypothetical protein LOC202781	**2,54**	chr7
LOC203547	203547	hypothetical protein LOC203547	**2,28**	chrX
LOC219638	219638	Hypothetical LOC219638	**2,22**	chr11
LOC23117 /// 6 /// 348162 /// 44		KIAA0220-like protein /// hypothetical gene LOC283846 /// hypothetical protein 3	**4,62**	chr16
LOC253842	253842	hypothetical protein LOC253842	**27,88**	chr9
LOC254128	254128	hypothetical protein LOC254128	**2,24**	chr2
LOC283377	283377	hypothetical protein LOC283377	**2,07**	chr12
LOC283481	283481	hypothetical protein LOC283481	**2,60**	chr13
LOC283871	283871	hypothetical protein LOC283871	**6,51**	chr16
LOC284058	284058	LOC284058 protein	**3,56**	chr17
LOC284214	284214	hypothetical protein LOC284214	**2,10**	chr18
LOC284373	284373	Hypothetical protein LOC284373	**2,06**	(vide)
LOC284408	284408	Hypothetical protein LOC284408	**2,47**	chr19
LOC284611	284611	hypothetical protein LOC284611	**3,67**	chr1
LOC284701	284701	hypothetical protein LOC284701	**7,29**	chr1
LOC284701 //4 /// 440470 /// 4		hypothetical protein LOC284701 /// hypothetical gene supported by AK128780 //	**6,79**	chr1
LOC284702	284702	hypothetical protein LOC284702	**4,19**	chr1
LOC284801	284801	hypothetical protein LOC284801	**3,96**	chr20
LOC285016	285016	hypothetical protein LOC285016	**2,78**	chr2
LOC285401	285401	hypothetical protein LOC285401	**2,37**	chr3
LOC285958	285958	hypothetical protein LOC285958	**2,45**	chr7
LOC286044	286044	hypothetical protein LOC286044	**4,30**	chr8
LOC339077 //440549 /// 440717		hypothetical gene supported by AK092558; AL137655; BC006361 /// similar to C	**2,38**	chr1
LOC342892	342892	Hypothetical protein LOC342892	**8,57**	chr19
LOC342979	342979	hypothetical LOC342979	**8,51**	chr19
LOC345630	345630	similar to fibrillarin	**2,26**	chr5
LOC347273	347273	similar to RIKEN cDNA 2310039E09	**3,68**	chr9
LOC348801	348801	hypothetical protein LOC348801	**3,88**	chr3
LOC349338 //349338 /// 374666		CXYorf1-related protein /// CXYorf1-related protein	**2,64**	chr2
LOC388291	388291	Hypothetical LOC388291	**2,10**	chr16
LOC388335	388335	similar to RIKEN cDNA A730055C05 gene	**2,42**	chr17
LOC388388	388388	chromodomain helicase DNA binding protein 3	**5,80**	chr17_random
LOC388494	388494	hypothetical gene supported by AL365406; BC034005	**23,78**	chr19
LOC388508	388508	similar to ribosomal protein L17	**3,52**	chr19
LOC388638	388638	hypothetical LOC388638	**8,32**	chr1
LOC388889 //388889 /// 440823		Hypothetical LOC388889 /// Hypothetical protein LOC150271	**3,63**	chr22
LOC389023	389023	hypothetical gene supported by BC032913; BC048425	**2,94**	chr2
LOC389188	389188	Hypothetical LOC389188	**3,17**	chr3
LOC389295	389295	Hypothetical protein LOC153561	**5,02**	chr5
LOC389362	389362	hypothetical LOC389362	**2,64**	chr6
LOC389541	389541	similar to CG14977-PA	**4,46**	chr7
LOC389831	389831	hypothetical gene supported by AL713796	**5,88**	chr7_random
LOC389857	389857	hypothetical protein	**3,19**	chrX
LOC390940	390940	similar to R28379_1	**3,60**	chr19
LOC391356	391356	similar to CG14903-PA	**2,32**	chr2
LOC391833	391833	Similar to 40S ribosomal protein S10	**3,01**	chr5
LOC400451	400451	hypothetical gene supported by AK075564; BC060873	**2,83**	chr15
LOC400506	400506	Similar to TSG118.1	**7,62**	chr16
LOC400680	400680	Hypothetical gene supported by AK097381; BC040866	**7,36**	chr19
LOC400690	400690	hypothetical gene supported by AK092138	**13,94**	chr19
LOC400740	400740	LOC440570	**4,08**	chr1
LOC400741	400741	hypothetical LOC400741	**3,60**	chr1
LOC400793	400793	hypothetical gene supported by AK125122	**3,07**	chr1
LOC401499	401499	Hypothetical LOC401499	**2,54**	chr9
LOC402563	402563	Hypothetical LOC401385	**2,22**	chr7
LOC439949	439949	hypothetical gene supported by AY007155	**7,84**	chr10
LOC439987	439987	LOC439987	**2,66**	chr10
LOC440008	1488 /// 440008	C-terminal binding protein 2 /// LOC440008	**4,18**	chr5
LOC440085	440085	similar to prothymosin alpha	**3,31**	chr2
LOC440122	440122	Similar to KRAB zinc finger protein 6D	**3,66**	chr12
LOC440132	440132	LOC440132	**4,64**	chr13
LOC440282	440282	Hypothetical protein LOC145783	**2,44**	chr15
LOC440288	440288	similar to FLJ16518 protein	**4,20**	chr15
LOC440338	440338	Hypothetical gene supported by AJ002784	**24,11**	chr16
LOC440388	440388	similar to coenzyme A diphosphatase	**3,79**	chr16
LOC440416	440416	Hypothetical gene supported by BC072410	**3,58**	chr17
LOC440426	440426	hypothetical gene supported by AK092922; AL831912	**3,61**	chr12

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LOC440524	440524	LOC440524	6,67	chr19
LOC440667 //67 /// 440669 /// 4		LOC440667 /// LOC440669 /// LOC440688	2,70	chr1
LOC440669	440669	LOC440669	3,25	chr1
LOC440701	440701	LOC440701	2,03	chr1
LOC440731	440731	LOC440731	2,13	chr1
LOC440957	440957	similar to CG32736-PA	2,41	chr3
LOC440971	440971	similar to Zinc finger protein Rlf (Rearranged L-myc fusion gene protein) (Zn-15	3,07	chr3
LOC440983	440983	hypothetical gene supported by BC066916	3,64	chr1
LOC440996	440996	Hypothetical gene supported by BC053580	2,45	chr5
LOC441027	441027	Similar to hypothetical protein LOC231503	4,73	chr4
LOC441114	441114	Similar to acidic ribosomal protein P0	2,02	chr16
LOC441164	441164	Chromosome 6 open reading frame 160	5,15	chr6
LOC441241 //441241 /// 441244		chaperonin containing TCP1, subunit 6A (zeta 1)-like /// chaperonin containing T	2,31	chr7
LOC441458	441458	hypothetical gene supported by AK091930	5,88	chr9
LOC441628	441628	similar to POU domain, class 5, transcription factor 1 (Octamer-binding transcrip	26,46	chr1
LOC442075	442075	weakly similar to serine/threonine protein kinase Kp78	3,39	chr3
LOC442447	442447	Similar to Chloride intracellular channel protein 4 (Intracellular chloride ion chann	10,45	chrX
LOC442699	442699	Zinc finger protein 100	6,69	chr7
LOC493856	493856	similar to RIKEN cDNA 1500009M05 gene	2,15	chr2
LOC494143	494143	similar to RIKEN cDNA 2510006C20 gene	3,65	chr2
LOC497257	497257	Hypothetical LOC497257	12,27	chr8
LOC554203	554203	hypothetical LOC554203	2,53	(vide)
LOC57168	57168	similar to aspartate beta hydroxylase (ASPH)	2,85	chr22
LOC58489	58489	hypothetical protein from EUROIMAGE 588495	2,65	chr15
LOC63920	63920	transposon-derived Buster3 transposase-like	2,27	(vide)
LOC641298	641298	PI-3-kinase-related kinase SMG-1 - like locus	2,16	chr16
LOC641522	641522	ADP-ribosylation factor-like 17 pseudogene 1	3,38	chr17
LOC81558	81558	C/EBP-induced protein /// C/EBP-induced protein	9,77	chr17
LOC84661	84661	dpy-30-like protein	2,82	chr2
LOC89894	89894	hypothetical protein BC000282	2,64	chr12
LOC90321	90321	hypothetical protein LOC90321	3,71	chr19
LOC90799	90799	hypothetical protein BC009518	3,93	chr17
LOC91431	91431	prematurely terminated mRNA decay factor-like	11,02	chr4
LOC91661	91661	Hypothetical protein BC001610	2,94	(vide)
LOC92345	92345	hypothetical protein BC008207	2,16	chr4
LOC92497	92497	hypothetical protein LOC92497	2,95	chr12
LOC92558	92558	hypothetical protein LOC92558	2,01	chr12
LOC94431	94431	similar to RNA polymerase I transcription factor RRN3	2,23	chr16
LOH11CR2A	4013	loss of heterozygosity, 11, chromosomal region 2, gene A	2,48	chr11
LONRF1	91694	LON peptidase N-terminal domain and ring finger 1	4,07	chr8
LPHN1	22859	latrophilin 1	5,34	chr19
LPHN2	23266	latrophilin 2	5,09	chr1
LPHN3	23284	latrophilin 3	7,21	chr4
LRIG1	26018	leucine-rich repeats and immunoglobulin-like domains 1 /// leucine-rich repeats a	5,65	chr3
LRIG2	9860	leucine-rich repeats and immunoglobulin-like domains 2	2,52	chr1
LRP6	4040	low density lipoprotein receptor-related protein 6	2,75	chr12
LRP8	7804	low density lipoprotein receptor-related protein 8, apolipoprotein e receptor	5,13	chr1
LRPPRC	10128	leucine-rich PPR-motif containing	4,08	chr2
LRRC16	55604	Leucine rich repeat containing 16	6,18	chr6
LRRC34	151827	leucine rich repeat containing 34	5,52	chr3
LRRC37B	114659	leucine rich repeat containing 37B	2,15	chr17
LRRC45	201255	leucine rich repeat containing 45	2,26	chr17
LRRC47	57470	leucine rich repeat containing 47	2,09	chr1
LRRC8B	23507	leucine rich repeat containing 8 family, member B	5,41	chr1
LRRC8D	55144	leucine rich repeat containing 8 family, member D	2,32	chr1
LRRN1	57633	leucine rich repeat neuronal 1	54,54	chr3
LRRN6A	84894	leucine rich repeat neuronal 6A	4,78	chr15
LRRTM4	80059	leucine rich repeat transmembrane neuronal 4	3,05	chr2
LSM2	57819	LSM2 homolog, U6 small nuclear RNA associated (S. cerevisiae)	2,62	chr6
LSM3	27258	LSM3 homolog, U6 small nuclear RNA associated (S. cerevisiae)	3,06	chr3
LSM4	25804	LSM4 homolog, U6 small nuclear RNA associated (S. cerevisiae)	3,74	chr19
LSM5	23658	LSM5 homolog, U6 small nuclear RNA associated (S. cerevisiae)	3,25	chr7
LSM6	11157	LSM6 homolog, U6 small nuclear RNA associated (S. cerevisiae)	4,62	chr4
LSM7	51690	LSM7 homolog, U6 small nuclear RNA associated (S. cerevisiae)	3,30	chr19
LSS	4047	lanosterol synthase (2,3-oxidosqualene-lanosterol cyclase)	2,03	chr21
LTA4H	4048	leukotriene A4 hydrolase	2,79	chr12
LUC7L	55692	LUC7-like (S. cerevisiae)	4,63	chr16

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LUC7L2	51631	LUC7-like 2 (S. cerevisiae)	**2,02**	chr7
LUZP5	54892	leucine zipper protein 5	**7,76**	chr7
LYAR	55646	hypothetical protein FLJ20425	**9,64**	chr4
LYPLA2	11313	lysophospholipase II	**2,90**	chr1
LYPLA2	3 /// 285840 /// 38	lysophospholipase II /// lysophospholipase II pseudogene 1 /// similar to Acyl-pro	**2,47**	chr1
LYPLA2	11313 /// 285840	lysophospholipase II /// lysophospholipase II pseudogene 1	**2,29**	chr1
LYPLAL1	127018	Lysophospholipase-like 1	**2,15**	chr1
M11S1	4076	membrane component, chromosome 11, surface marker 1	**2,59**	chr11
MAC30	27346	hypothetical protein MAC30	**12,85**	chr17
MAD2L1	4085	MAD2 mitotic arrest deficient-like 1 (yeast)	**5,91**	chr14
MAD2L1BP	9587	MAD2L1 binding protein	**2,09**	chr6
MAD2L2	10459	MAD2 mitotic arrest deficient-like 2 (yeast)	**8,42**	chr1
MAFB	9935	v-maf musculoaponeurotic fibrosarcoma oncogene homolog B (avian)	**2,53**	chr20
MAGEE1	57692	melanoma antigen family E, 1	**2,19**	chrX
MAGI1	9223	membrane associated guanylate kinase, WW and PDZ domain containing 1	**4,14**	chr3
MAGI2	9863	membrane associated guanylate kinase, WW and PDZ domain containing 2	**5,20**	chr7
MAGOH	4116	mago-nashi homolog, proliferation-associated (Drosophila)	**4,79**	chr1
MAK3	80218	Mak3 homolog (S. cerevisiae)	**3,96**	chr3
MAL2	114569	mal, T-cell differentiation protein 2	**58,76**	chr8
MAML1	9794	mastermind-like 1 (Drosophila)	**2,39**	chr5
MAN2C1	4123	Mannosidase, alpha, class 2C, member 1	**2,73**	chr15
MAP2K6	5608	mitogen-activated protein kinase kinase 6	**20,91**	chr17
MAP3K1	4214	Mitogen-activated protein kinase kinase kinase 1	**3,76**	chr5
MAP3K4	4216	mitogen-activated protein kinase kinase kinase 4	**4,78**	chr6
MAP3K9	4293	mitogen-activated protein kinase kinase kinase 9	**6,61**	chr14
MAP4K1	11184	mitogen-activated protein kinase kinase kinase kinase 1	**4,85**	chr19
MAP7	9053	microtubule-associated protein 7	**167,78**	chr6
MAPK1	5594	mitogen-activated protein kinase 1	**2,26**	chr22
MAPK13	5603	mitogen-activated protein kinase 13	**3,98**	chr6
MAPK7	5598	mitogen-activated protein kinase 7	**2,10**	chr17
MAPKAPK3	7867	mitogen-activated protein kinase-activated protein kinase 3	**4,42**	chr3
MAPKAPK5	8550	mitogen-activated protein kinase-activated protein kinase 5	**3,60**	chr12
MAPRE2	10982	microtubule-associated protein, RP/EB family, member 2	**2,47**	chr18
MARCKSL1	65108	MARCKS-like 1	**3,12**	chr1
MARK1	4139	MAP/microtubule affinity-regulating kinase 1	**6,81**	chr1
MARS	4141	methionine-tRNA synthetase	**2,15**	chr12
MARVELD2	153562	MARVEL domain containing 2	**18,36**	chr5
MARVELD3	91862	MARVEL domain containing 3	**14,15**	chr16
MASA	58478	E-1 enzyme	**2,42**	chr4
MASK	51765	Mst3 and SOK1-related kinase	**2,12**	chrX
MASS1	84059	monogenic, audiogenic seizure susceptibility 1 homolog (mouse)	**15,98**	chr5
MASTL	84930	microtubule associated serine/threonine kinase-like	**4,33**	chr10
MAT2A	4144	Methionine adenosyltransferase II, alpha	**3,39**	chr2
MATK	4145	megakaryocyte-associated tyrosine kinase	**5,85**	chr19
MATR3	9782	Matrin 3	**5,48**	chr5
MBD2	8932	methyl-CpG binding domain protein 2	**60,46**	chr18
MBD3	53615	methyl-CpG binding domain protein 3	**2,07**	chr19
MBD4	8930	methyl-CpG binding domain protein 4	**2,13**	chr3
MBP	4155	myelin basic protein	**2,20**	chr18
MBTD1	54799	Mbt domain containing 1	**7,51**	chr17
MCCC1	56922	methylcrotonoyl-Coenzyme A carboxylase 1 (alpha)	**2,07**	chr3
MCCC2	64087	methylcrotonoyl-Coenzyme A carboxylase 2 (beta)	**3,32**	chr5
MCM10	55388	MCM10 minichromosome maintenance deficient 10 (S. cerevisiae)	**13,39**	chr10
MCM2	4171	MCM2 minichromosome maintenance deficient 2, mitotin (S. cerevisiae)	**10,74**	chr3
MCM3	4172	MCM3 minichromosome maintenance deficient 3 (S. cerevisiae)	**12,59**	chr6
MCM3APAS	114044	MCM3 minichromosome maintenance deficient 3 (S. cerevisiae) associated prot	**2,12**	chr21
MCM4	4173	MCM4 minichromosome maintenance deficient 4 (S. cerevisiae)	**12,12**	chr8
MCM5	4174	MCM5 minichromosome maintenance deficient 5, cell division cycle 46 (S. cerev	**16,16**	chr22
MCM6	4175	MCM6 minichromosome maintenance deficient 6 (MIS5 homolog, S. pombe) (S.	**6,30**	chr2
MCM7	4176	MCM7 minichromosome maintenance deficient 7 (S. cerevisiae)	**10,45**	chr7
MCM8	84515	MCM8 minichromosome maintenance deficient 8 (S. cerevisiae)	**5,60**	chr20
MCOLN3	55283	mucolipin 3	**3,86**	chr1
MCPH1	79648	Microcephaly, primary autosomal recessive 1	**2,07**	chr8
MDC1	9656	mediator of DNA damage checkpoint 1	**3,50**	chr6
MDH1	4190	malate dehydrogenase 1, NAD (soluble)	**2,18**	chr2
MDK	4192	midkine (neurite growth-promoting factor 2)	**2,44**	chr11
MDM4	4194	Mdm4, transformed 3T3 cell double minute 4, p53 binding protein (mouse)	**2,37**	chr1

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MDN1	23195	MDN1, midasin homolog (yeast)	**11,08**	chr6
ME2	4200	malic enzyme 2, NAD(+)-dependent, mitochondrial	**2,50**	chr18
MEA1	4201	male-enhanced antigen 1	**2,12**	chr6
MED25	81857	mediator of RNA polymerase II transcription, subunit 25 homolog (yeast)	**3,15**	chr19
MED28	80306	mediator of RNA polymerase II transcription, subunit 28 homolog (yeast)	**5,34**	chr1
MED4	29079	mediator of RNA polymerase II transcription, subunit 4 homolog (yeast)	**2,07**	chr13
MED6	10001	mediator of RNA polymerase II transcription, subunit 6 homolog (yeast)	**2,26**	chr14
MED9	55090	mediator of RNA polymerase II transcription, subunit 9 homolog (yeast)	**2,04**	chr17
MEF2A	4205	MADS box transcription enhancer factor 2, polypeptide A (myocyte enhancer fac	**2,97**	chr15
MEGF10	84466	MEGF10 protein	**68,97**	chr5
MELK	9833	maternal embryonic leucine zipper kinase	**3,45**	chr9
MERTK	10461	c-mer proto-oncogene tyrosine kinase	**2,50**	chr2
METAP1	23173	methionyl aminopeptidase 1	**2,02**	chr4
METAP2	10988	Methionyl aminopeptidase 2	**3,16**	chr12
METTL3	56339	methyltransferase like 3	**3,97**	chr14
MFHAS1	9258	malignant fibrous histiocytoma amplified sequence 1	**11,20**	chr8
MFSD3	113655	major facilitator superfamily domain containing 3	**5,53**	chr8
MGA	23269	MAX gene associated	**2,97**	chr15
MGAT4A	11320	Mannosyl (alpha-1,3-)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase, is	**2,70**	chr2
MGC10911	84262	hypothetical protein MGC10911	**2,70**	chr7
MGC10993	80775	hypothetical protein MGC10993	**6,41**	chr2
MGC11266	79172	hypothetical protein MGC11266	**3,66**	chr2
MGC13017	91368	similar to RIKEN cDNA A430101B06 gene	**2,13**	chr5
MGC13096	84306	hypothetical protein MGC13096 /// hypothetical protein MGC13096	**9,22**	chr19
MGC13125	84811	hypothetical protein MGC13125 /// hypothetical protein MGC13125	**4,20**	chr11
MGC13170	84798	multidrug resistance-related protein /// multidrug resistance-related protein	**3,54**	chr19
MGC13183	84318	hypothetical protein MGC13183 /// hypothetical protein MGC13183	**4,96**	chr12
MGC13204	83695	hypothetical protein MGC13204	**5,93**	chr12
MGC13379	51259	HSPC244	**2,66**	chr11
MGC14798	89978	similar to RIKEN cDNA 5730421E18 gene	**7,49**	chr15
MGC15416	84331	hypothetical protein MGC15416	**4,62**	chr16
MGC15634	84841	hypothetical protein MGC15634	**10,55**	chr1
MGC15763	92106	hypothetical protein BC008322	**2,62**	chr3
MGC16207	84853	hypothetical protein MGC16207	**2,09**	chr11
MGC16824	57020	Esophageal cancer associated protein	**4,86**	chr16
MGC16943	112479	similar to RIKEN cDNA 4933424N09 gene	**2,14**	chr16
MGC17299	128218	hypothetical protein MGC17299	**11,61**	chr1
MGC20255	90324	hypothetical protein MGC20255	**2,21**	chr19
MGC21881	389741	hypothetical protein MGC21881	**7,42**	chr9
MGC21881	389741 /// 401510	hypothetical protein MGC21881 /// hypothetical LOC401510	**4,93**	chr9
MGC22014	200424	hypothetical protein MGC22014	**2,12**	chr2
MGC22265	349035	(clone CB1) mRNA fragment /// Hypothetical protein MGC22265	**9,90**	chr5
MGC22793	221908	hypothetical protein MGC22793	**3,17**	chr7
MGC23280	147015	hypothetical protein MGC23280	**8,07**	chr17
MGC2408	84291	hypothetical protein MGC2408	**2,60**	chr3
MGC24103	158295	hypothetical protein MGC24103	**3,67**	chr9
MGC24665	116028	hypothetical protein MGC24665	**22,02**	chr16
MGC2477	79081	hypothetical protein MGC2477	**3,34**	chr11
MGC2574	79080	hypothetical protein MGC2574	**3,08**	chr11
MGC27345	157247	hypothetical protein MGC27345	**2,25**	chr7
MGC3040	66000	hypothetical protein MGC3040	**5,04**	chr3
MGC3196	79064	hypothetical protein MGC3196	**4,01**	chr11
MGC33214	153396	hypothetical protein MGC33214	**2,14**	chr5
MGC3329	79066	hypothetical protein MGC3329	**3,75**	chr17
MGC33584	285971	hypothetical protein MGC33584	**4,88**	chr7
MGC33926	130733	hypothetical protein MGC33926	**3,41**	chr2
MGC3731	79159	hypothetical protein MGC3731	**3,31**	chr22
MGC39606	399668	hypothetical protein MGC39606	**4,51**	chrX
MGC40107	254863	hypothetical protein MGC40107	**2,43**	chr17
MGC40168	148645	hypothetical protein MGC40168	**2,80**	chr1
MGC40397	121053	hypothetical protein MGC40397	**3,46**	chr12
MGC40405	257415 /// 401015	hypothetical protein MGC40405 /// similar to RIKEN cDNA 5830415L20	**2,57**	chr5
MGC4172	79154	short-chain dehydrogenase/reductase	**6,97**	chr17
MGC4308	84319	hypothetical protein MGC4308 /// hypothetical protein MGC4308	**4,63**	chr3
MGC4399	84275	mitochondrial carrier protein	**2,95**	chr1
MGC4562	115752	hypothetical protein MGC4562	**3,53**	chr15
MGC45866	90381	leucine-rich repeat kinase 1	**7,82**	chr15

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MGC4825	79135	hypothetical protein MGC4825	3,02	chrX
MGC50372	253143	hypothetical protein MGC50372	3,80	chr22
MGC5139	84747	hypothetical protein MGC5139	2,23	chr12
MGC52000	375260	CXYorf1-related protein	2,04	chr1
MGC5352	192111	Bcl-XL-binding protein v68	2,32	chr12
MGC57346	401884	hypothetical LOC401884	4,47	chr17
MGC61598	441478	Similar to ankyrin-repeat protein Nrarp	19,06	chr9
MGC72075	340277	hypothetical protein MGC72075	8,77	chr7
MGC90512	121642	similar to hypothetical protein 9530023G02	2,93	chr12
MGC9913	386759	hypothetical protein MGC9913	2,39	chr19
MGEA5	10724	meningioma expressed antigen 5 (hyaluronidase)	2,18	chr10
MGST1	4257	microsomal glutathione S-transferase 1	5,00	chr12
MID1IP1	58526	MID1 interacting protein 1 (gastrulation specific G12-like (zebrafish))	2,55	chrX
MIDN	90007	midnolin	2,07	chr19
MIPEP	4285	mitochondrial intermediate peptidase	2,19	chr13
MIZF	25988	MBD2 (methyl-CpG-binding protein)-interacting zinc finger protein	2,37	chr11
MKI67	4288	antigen identified by monoclonal antibody Ki-67	5,75	chr10
MKI67IP	84365	MKI67 (FHA domain) interacting nucleolar phosphoprotein	2,67	chr2
MKKS	8195	McKusick-Kaufman syndrome	2,48	chr20
MKLN1	4289	muskelin 1, intracellular mediator containing kelch motifs	2,18	chr7
MKNK2	2872	MAP kinase interacting serine/threonine kinase 2	2,09	chr19
MLC1SA	140465	myosin light chain 1 slow a	2,63	chr12
MLF1IP	79682	MLF1 interacting protein	13,67	chr4
MLH1	4292	mutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli)	2,05	chr3
MLL2	8085	myeloid/lymphoid or mixed-lineage leukemia 2	2,05	chr12
MLL3	58508	myeloid/lymphoid or mixed-lineage leukemia 3	2,37	chr7
MLL5	55904	Myeloid/lymphoid or mixed-lineage leukemia 5 (trithorax homolog, Drosophila)	3,62	chr7
MLLT10	8028	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); tra	3,11	chr10
MLLT4	4301	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); tra	4,34	chr6
MMD	23531	monocyte to macrophage differentiation-associated	4,38	chr17
MMRP19	51074	likely ortholog of mouse monocyte macrophage 19	2,09	chr9
MMS19L	64210	MMS19-like (MET18 homolog, S. cerevisiae)	2,34	chr10
MNAB	54542	membrane associated DNA binding protein	2,82	chr9
MNS1	55329	meiosis-specific nuclear structural 1	3,74	chr15
MOBKL2B	79817	MOB1, Mps One Binder kinase activator-like 2B (yeast)	17,80	chr9
MOSC1	64757	MOCO sulphurase C-terminal domain containing 1	16,57	chr1
MPDU1	9526	mannose-P-dolichol utilization defect 1	2,08	chr17
MPDZ	8777	multiple PDZ domain protein	2,30	chr9
MPHOSPH1	9585	M-phase phosphoprotein 1	4,74	chr10
MPHOSPH6	10200	M-phase phosphoprotein 6	2,52	chr16
MPHOSPH9	10198	M-phase phosphoprotein 9	2,97	chr12
MPP6	51678	membrane protein, palmitoylated 6 (MAGUK p55 subfamily member 6)	6,18	chr7
MPPE1	65258	metallophosphoesterase 1	14,58	chr18
MPPED2	744	metallophosphoesterase domain containing 2	7,34	chr11
MRE11A	4361	MRE11 meiotic recombination 11 homolog A (S. cerevisiae)	3,99	chr11
MRP63	78988	mitochondrial ribosomal protein 63	2,33	chr13
MRPL10	124995	mitochondrial ribosomal protein L10	2,65	chr17
MRPL11	65003	mitochondrial ribosomal protein L11	5,39	chr11
MRPL12	6182	mitochondrial ribosomal protein L12	2,44	chr17
MRPL13	28998	mitochondrial ribosomal protein L13	2,37	chr8
MRPL14	64928	mitochondrial ribosomal protein L14	2,09	chr6
MRPL15	29088	mitochondrial ribosomal protein L15	3,00	chr8
MRPL16	54948	mitochondrial ribosomal protein L16	4,43	chr11
MRPL2	51069	mitochondrial ribosomal protein L2	2,12	chr6
MRPL21	219927	mitochondrial ribosomal protein L21	3,67	chr11
MRPL22	29093	mitochondrial ribosomal protein L22	2,44	chr5
MRPL27	51264	mitochondrial ribosomal protein L27 /// mitochondrial ribosomal protein L27	2,09	chr17
MRPL30	51263	mitochondrial ribosomal protein L30	2,16	chr2
MRPL32	64983	mitochondrial ribosomal protein L32	3,38	chr7
MRPL34	64981	mitochondrial ribosomal protein L34 /// mitochondrial ribosomal protein L34	2,57	chr19
MRPL35	51318	mitochondrial ribosomal protein L35	2,30	chr2
MRPL39	54148	mitochondrial ribosomal protein L39	2,88	chr21
MRPL4	51073	mitochondrial ribosomal protein L4	2,26	chr19
MRPL42	28977	mitochondrial ribosomal protein L42	2,75	chr12
MRPL44	65080	mitochondrial ribosomal protein L44	3,25	chr2
MRPL45	84311	mitochondrial ribosomal protein L45 /// mitochondrial ribosomal protein L45	3,11	chr17
MRPL46	26589	mitochondrial ribosomal protein L46	2,50	chr15

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MRPL47	57129	mitochondrial ribosomal protein L47	2,58	chr3
MRPL50	54534	mitochondrial ribosomal protein L50	2,86	chr9
MRPL51	51258	mitochondrial ribosomal protein L51 /// mitochondrial ribosomal protein L51	2,20	chr12
MRPS12	6183	mitochondrial ribosomal protein S12	3,50	chr19
MRPS17	51373	mitochondrial ribosomal protein S17	2,53	chr7
MRPS18A	55168	mitochondrial ribosomal protein S18A	2,69	chr6
MRPS18B	28973	mitochondrial ribosomal protein S18B	3,26	chr6
MRPS2	51116	mitochondrial ribosomal protein S2	3,60	chr9
MRPS23	51649	mitochondrial ribosomal protein S23	2,28	chr17
MRPS25	64432	mitochondrial ribosomal protein S25	2,83	chr3
MRPS26	64949	mitochondrial ribosomal protein S26	4,84	chr20
MRPS27	23107	mitochondrial ribosomal protein S27	2,61	chr5
MRPS28	28957	mitochondrial ribosomal protein S28	3,85	chr8
MRPS30	10884	mitochondrial ribosomal protein S30	3,61	chr5
MRPS31	10240	mitochondrial ribosomal protein S31	3,38	chr13
MRPS34	65993	mitochondrial ribosomal protein S34	4,96	chr16
MRPS6	64968	Mitochondrial ribosomal protein S6	4,16	chr21
MRPS7	51081	mitochondrial ribosomal protein S7	2,45	chr17
MRPS9	64965	mitochondrial ribosomal protein S9	5,66	chr2
MRS2L	57380	MRS2-like, magnesium homeostasis factor (S. cerevisiae)	8,79	chr6
MSH2	4436	mutS homolog 2, colon cancer, nonpolyposis type 1 (E. coli)	19,28	chr2
MSH5	4439	mutS homolog 5 (E. coli)	2,25	chr6
MSH6	2956	mutS homolog 6 (E. coli)	5,15	chr2
MSTP9	11223	macrophage stimulating, pseudogene 9	2,13	chr1
MTA1	9112	metastasis associated 1 /// metastasis associated 1	2,49	chr14
MTA3	57504	metastasis associated 1 family, member 3	8,95	chr2
MTAC2D1	123036	membrane targeting (tandem) C2 domain containing 1	7,55	chr14
MTCH2	23788	mitochondrial carrier homolog 2 (C. elegans)	2,86	chr11
MTERFD1	51001	MTERF domain containing 1	3,13	chr8
MTERFD2	130916	MTERF domain containing 2	3,08	chr2
MTF2	22823	Metal response element binding transcription factor 2	12,75	chr1
MTHFD1	4522	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1, methenyltetra	4,04	chr14
MTHFS	10588	5,10-methenyltetrahydrofolate synthetase (5-formyltetrahydrofolate cyclo-ligase)	2,30	chr15
MTIF2	4528	mitochondrial translational initiation factor 2	2,55	chr2
MTL5	9633	Metallothionein-like 5, testis-specific (tesmin)	2,09	chr11
MTMR12	54545	myotubularin related protein 12	2,61	chr5
MTMR9	66036	myotubularin related protein 9	2,16	chr8
MTP18	51537	mitochondrial protein 18 kDa	8,93	chr22
MTRF1	9617	mitochondrial translational release factor 1	3,66	chr13
MTSS1	9788	metastasis suppressor 1	3,63	chr8
MTX2	10651	metaxin 2	2,73	chr2
MTX3	345778	metaxin 3	2,34	chr5
MUM1	84939	Melanoma associated antigen (mutated) 1	4,63	chr19
MUTYH	4595	mutY homolog (E. coli)	9,11	chr1
MYB	4602	v-myb myeloblastosis viral oncogene homolog (avian)	8,56	chr6
MYBL2	4605	v-myb myeloblastosis viral oncogene homolog (avian)-like 2	13,60	chr20
MYCBP	26292	c-myc binding protein	2,40	chr16
MYCL1	4610	v-myc myelocytomatosis viral oncogene homolog 1, lung carcinoma derived (av	3,75	chr1
MYCN	4613	v-myc myelocytomatosis viral related oncogene, neuroblastoma derived (avian)	52,98	chr2
MYEF2	50804	myelin expression factor 2	3,20	chr15
MYLIP	29116	myosin regulatory light chain interacting protein	5,48	chr6
MYO10	4651	myosin X	2,16	chr5
MYO5B	4645	myosin VB	7,83	chr18
MYO5C	55930	myosin VC	29,17	chr15
MYOHD1	80179	myosin head domain containing 1	3,08	chr17
MYOZ3	91977	myozenin 3	2,88	chr5
MYSM1	114803	myb-like, SWIRM and MPN domains 1	2,47	chr1
MYST2	11143	MYST histone acetyltransferase 2 /// MYST histone acetyltransferase 2	8,92	chr17
MYST4	23522	MYST histone acetyltransferase (monocytic leukemia) 4	3,88	chr10
N4BP2	55728	Nedd4 binding protein 2	2,98	chr4
NAALAD2	10003	N-acetylated alpha-linked acidic dipeptidase 2	2,87	chr11
NACA	4666 /// 83955	nascent-polypeptide-associated complex alpha polypeptide /// nascent-polypepti	2,08	chr12
NAG6	64753	hypothetical protein DKFZp434G156	3,25	chr7
NALP12	91662	NACHT, leucine rich repeat and PYD containing 12	2,63	chr19
NALP2	55655	NACHT, leucine rich repeat and PYD containing 2	28,94	chr19
NANOG	79923	Nanog homeobox	300,80	chr12
NANOS1	340719	nanos homolog 1 (Drosophila)	2,08	chr10

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NAP1L1	4673	nucleosome assembly protein 1-like 1	**2,67**	chr12
NAP1L2	4674	nucleosome assembly protein 1-like 2	**27,60**	chrX
NAP1L3	4675	nucleosome assembly protein 1-like 3	**2,43**	chrX
NAPRT1	93100	nicotinate phosphoribosyltransferase domain containing 1	**3,57**	chr8
NARF	26502	nuclear prelamin A recognition factor	**2,13**	chr17
NARG1	80155	NMDA receptor regulated 1	**2,55**	chr4
NARG1L	79612	NMDA receptor regulated 1-like	**4,61**	chr13
NARG2	79664	NMDA receptor regulated 2	**2,76**	chr3
NASP	4678	Nuclear autoantigenic sperm protein (histone-binding)	**33,83**	chr1
NBEA	26960	neurobeachin	**6,74**	chr13
NBEAL2	23218	neurobeachin-like 2	**2,30**	chr3
NBLA04196	64921	Putative protein product of Nbla04196	**2,95**	chr7
NCBP1	4686	nuclear cap binding protein subunit 1, 80kDa	**2,94**	chr9
NCL	4691	nucleolin	**2,27**	chr2
NCOA5	57727	Nuclear receptor coactivator 5	**2,49**	chr20
NCOA6IP	96764	nuclear receptor coactivator 6 interacting protein	**3,74**	chr8
NCRMS	196475	non-coding RNA in rhabdomyosarcoma (RMS)	**27,12**	chr12
NDRG2	57447	NDRG family member 2	**2,42**	chr14
NDUFA13	51079	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 13	**2,10**	chr19
NDUFA6	4700	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 6, 14kDa	**2,13**	chr22
NDUFAB1	4706	NADH dehydrogenase (ubiquinone) 1, alpha/beta subcomplex, 1, 8kDa	**2,27**	chr16
NDUFB10	4716	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 10, 22kDa	**2,50**	chr16
NDUFB9	4715	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 9, 22kDa	**2,05**	chr8
NDUFS3	4722	NADH dehydrogenase (ubiquinone) Fe-S protein 3, 30kDa (NADH-coenzyme Q	**2,77**	chr11
NDUFS6	4726	NADH dehydrogenase (ubiquinone) Fe-S protein 6, 13kDa (NADH-coenzyme Q	**2,48**	chr5
NDUFS7	374291	NADH dehydrogenase (ubiquinone) Fe-S protein 7, 20kDa (NADH-coenzyme Q	**2,57**	chr19
NDUFV2	4729	NADH dehydrogenase (ubiquinone) flavoprotein 2, 24kDa	**2,74**	chr18
NEBL	10529	nebulette	**8,36**	chr10
NEF3	4741	neurofilament 3 (150kDa medium)	**12,02**	chr8
NEFL	4747	neurofilament, light polypeptide 68kDa	**19,79**	chr8
NEIL3	55247	nei endonuclease VIII-like 3 (E. coli)	**2,63**	chr4
NEK2	4751	NIMA (never in mitosis gene a)-related kinase 2	**4,74**	chr14
NEK4	6787	NIMA (never in mitosis gene a)-related kinase 4	**3,21**	chr3
NEK8	284086	NIMA (never in mitosis gene a)- related kinase 8	**2,58**	chr17
NELL2	4753	NEL-like 2 (chicken) /// NEL-like 2 (chicken)	**69,31**	chr12
NEO1	4756	neogenin homolog 1 (chicken)	**2,53**	chr15
NEXN	91624	nexilin (F actin binding protein)	**2,74**	chr1
NFATC2IP	84901	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 interacti	**6,94**	chr16
NFE2L3	9603	nuclear factor (erythroid-derived 2)-like 3	**2,81**	chr7
NFRKB	4798	nuclear factor related to kappaB binding protein	**2,44**	chr11
NFX1	4799	nuclear transcription factor, X-box binding 1	**2,10**	chr9
NFXL1	152518	nuclear transcription factor, X-box binding-like 1	**3,29**	chr4
NFYB	4801	nuclear transcription factor Y, beta	**5,78**	chr3
NGFRAP1L1	340542	NGFRAP1-like 1	**16,66**	chrX
NGLY1	55768	N-glycanase 1	**2,30**	chr3
NHP2L1	4809	NHP2 non-histone chromosome protein 2-like 1 (S. cerevisiae)	**2,19**	chr22
NHSL1	57224	NHS-like 1	**3,25**	chr6
NIF3L1	60491	NIF3 NGG1 interacting factor 3-like 1 (S. pombe)	**4,92**	chr2
NIFIE14	10430	seven transmembrane domain protein	**2,75**	chr19
NIPBL	25836	Nipped-B homolog (Drosophila)	**4,22**	chr5
NJMU-R1	64149	protein kinase Njmu-R1	**2,21**	chr17
NLE1	54475	notchless homolog 1 (Drosophila)	**4,48**	chr17
NLGN4X	57502	neuroligin 4, X-linked	**60,63**	chrX
NLK	51701	nemo like kinase	**3,72**	chr17
NLN	57486	neurolysin (metallopeptidase M3 family)	**4,02**	chr5
NME3	4832	non-metastatic cells 3, protein expressed in	**2,42**	chr16
NMI	9111	N-myc (and STAT) interactor	**2,23**	chr2
NMNAT2	23057	nicotinamide nucleotide adenylyltransferase 2	**2,56**	chr1
NMU	10874	neuromedin U	**53,18**	chr4
NOB1P	28987	nin one binding protein	**3,73**	chr4
NOC4L	79050	nucleolar complex associated 4 homolog (S. cerevisiae)	**2,41**	chr12
NODAL	4838	nodal homolog (mouse)	**10,18**	chr10
NOL1	4839	nucleolar protein 1, 120kDa	**2,23**	chr12
NOL11	25926	nucleolar protein 11	**4,69**	chr17
NOL5A	10528	nucleolar protein 5A (56kDa with KKE/D repeat)	**6,20**	chr20
NOL7	51406	Nucleolar protein 7, 27kDa	**2,15**	chr6
NOL9	79707	nucleolar protein 9	**2,03**	chr1

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NOLC1	9221	nucleolar and coiled-body phosphoprotein 1	**6,23**	chr10
NOP5/NOP58	51602	nucleolar protein NOP5/NOP58	**3,26**	chr2
NOSIP	51070	nitric oxide synthase interacting protein	**2,37**	chr19
NOVA1	4857	neuro-oncological ventral antigen 1	**2,65**	chr14
NP	4860	nucleoside phosphorylase	**2,63**	chr14
NPAT	4863	nuclear protein, ataxia-telangiectasia locus	**2,48**	chr11
NPM1	4869	nucleophosmin (nucleolar phosphoprotein B23, numatrin) /// nucleophosmin (nu	**2,54**	chr1
NPM3	10360	nucleophosmin/nucleoplasmin, 3	**8,82**	chr10
NPTN	27020	Neuroplastin	**2,56**	chr15
NPTX1	4884	neuronal pentraxin I	**4,21**	chr17
NPTX2	4885	neuronal pentraxin II	**6,43**	chr7
NQO2	4835	NAD(P)H dehydrogenase, quinone 2	**2,60**	chr6
NR2C1	7181	nuclear receptor subfamily 2, group C, member 1	**2,54**	chr12
NR2C2	7182	Nuclear receptor subfamily 2, group C, member 2	**2,25**	chr3
NR2F6	2063	nuclear receptor subfamily 2, group F, member 6	**4,56**	chr19
NR5A2	2494	nuclear receptor subfamily 5, group A, member 2	**2,33**	chr1
NRF1	4899	nuclear respiratory factor 1	**2,68**	chr7
NRG3	10718	neuregulin 3	**2,28**	chr10
NRM	11270	nurim (nuclear envelope membrane protein)	**2,05**	chr6
NRXN1	9378	neurexin 1	**3,54**	chr2
NSBP1	79366	nucleosomal binding protein 1	**9,80**	chrX
NSD1	64324	nuclear receptor binding SET domain protein 1	**4,48**	chr5
NSDHL	50814	NAD(P) dependent steroid dehydrogenase-like	**2,22**	chrX
NSUN2	54888	NOL1/NOP2/Sun domain family, member 2	**2,30**	chr5
NSUN5	55695	NOL1/NOP2/Sun domain family, member 5	**3,89**	chr7
NSUN5C	260294	NOL1/NOP2/Sun domain family, member 5C	**4,60**	chr7
NSUN6	221078	NOL1/NOP2/Sun domain family, member 6	**2,16**	chr10
NT5C	30833	5', 3'-nucleotidase, cytosolic	**2,07**	chr7
NT5C2	22978	5'-nucleotidase, cytosolic II	**2,43**	chr10
NT5C2L1	221294	5'-nucleotidase, cytosolic II-like 1	**7,02**	chr6
NTHL1	4913	nth endonuclease III-like 1 (E. coli)	**4,93**	chr16
NTS	4922	neurotensin	**10,94**	chr12
NUBP1	4682	nucleotide binding protein 1 (MinD homolog, E. coli)	**2,03**	chr16
NUCKS1	64710	nuclear casein kinase and cyclin-dependent kinase substrate 1	**2,78**	chr1
NUDC	10726	nuclear distribution gene C homolog (A. nidulans)	**3,08**	chr1
NUDCD1	84955	NudC domain containing 1	**2,13**	chr8
NUDCD2	134492	NudC domain containing 2	**3,81**	chr5
NUDT1	4521	nudix (nucleoside diphosphate linked moiety X)-type motif 1	**7,03**	chr7
NUDT10	170685	nudix (nucleoside diphosphate linked moiety X)-type motif 10	**3,37**	chrX
NUDT11	55190	nudix (nucleoside diphosphate linked moiety X)-type motif 11	**2,89**	chrX
NUDT15	55270	nudix (nucleoside diphosphate linked moiety X)-type motif 15	**6,99**	chr13
NUDT21	11051	nudix (nucleoside diphosphate linked moiety X)-type motif 21	**3,80**	chr16
NUDT5	11164	Nudix (nucleoside diphosphate linked moiety X)-type motif 5	**2,44**	chr10
NUFIP1	26747	nuclear fragile X mental retardation protein interacting protein 1	**4,02**	chr6
NUP107	57122	nucleoporin 107kDa	**4,23**	chr12
NUP133	55746	nucleoporin 133kDa	**2,28**	chr1
NUP153	9972	nucleoporin 153kDa	**2,03**	chr6
NUP155	9631	nucleoporin 155kDa	**2,67**	chr5
NUP160	23279	nucleoporin 160kDa	**3,04**	chr11
NUP188	23511	nucleoporin 188kDa	**2,37**	chr9
NUP205	23165	nucleoporin 205kDa	**4,75**	chr7
NUP210	23225	nucleoporin 210kDa	**9,21**	chr3
NUP214	8021	nucleoporin 214kDa	**2,51**	chr9
NUP35	129401	nucleoporin 35kDa	**6,49**	chr2
NUP37	79023	nucleoporin 37kDa	**2,47**	chr12
NUP43	348995	nucleoporin 43kDa	**2,01**	chr6
NUP50	10762	nucleoporin 50kDa	**2,88**	chr22
NUP54	53371	nucleoporin 54kDa	**2,89**	chr4
NUP62	23636	nucleoporin 62kDa	**3,03**	chr19
NUP88	4927	nucleoporin 88kDa	**3,83**	chr17
NUP93	9688	nucleoporin 93kDa	**3,63**	chr16
NUP98	4928	nucleoporin 98kDa	**2,14**	chr11
NUPL1	9818	Nucleoporin like 1	**2,48**	chr13
NUSAP1	51203	nucleolar and spindle associated protein 1	**7,77**	chr15
NVL	4931	nuclear VCP-like	**3,43**	chr1
NXT2	55916	nuclear transport factor 2-like export factor 2	**2,58**	chrX
NY-REN-41	91057	NY-REN-41 antigen	**6,41**	chr11

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NY-REN-58	51134	NY-REN-58 antigen	2,68	chr12
NY-SAR-48	93323	sarcoma antigen NY-SAR-48	2,84	chr19
OACT1	154141	O-acyltransferase (membrane bound) domain containing 1	3,43	chr6
OAZ2	4947	ornithine decarboxylase antizyme 2	6,10	chr15
OCIAD2	132299	OCIA domain containing 2	3,15	chr4
OCLN	4950	Occludin	32,56	chr5
OFD1	8481	oral-facial-digital syndrome 1	2,37	chrX
OGDH	4967	Oxoglutarate (alpha-ketoglutarate) dehydrogenase (lipoamide)	2,09	chr22
OGDHL	55753	oxoglutarate dehydrogenase-like	4,21	chr10
OIP5	11339	Opa interacting protein 5	29,30	chr15
OLFM1	10439	olfactomedin 1	24,69	chr9
OMA1	115209	OMA1 homolog, zinc metallopeptidase (S. cerevisiae)	2,34	chr1
OPA1	4976	optic atrophy 1 (autosomal dominant)	2,11	chr3
ORC1L	4998	origin recognition complex, subunit 1-like (yeast)	14,39	chr1
ORC2L	4999	origin recognition complex, subunit 2-like (yeast)	6,24	chr2
ORC3L	23595	origin recognition complex, subunit 3-like (yeast)	3,36	chr6
ORC4L	5000	origin recognition complex, subunit 4-like (yeast)	2,43	chr2
ORC5L	5001	origin recognition complex, subunit 5-like (yeast)	2,06	chr7
ORC6L	23594	origin recognition complex, subunit 6 homolog-like (yeast)	4,91	chr16
OSBPL10	114884	oxysterol binding protein-like 10	3,31	chr3
OSBPL1A	114876	oxysterol binding protein-like 1A	2,50	chr18
OSGEP	55644	O-sialoglycoprotein endopeptidase	3,13	chr14
OSGEPL1	64172	O-sialoglycoprotein endopeptidase-like 1	2,27	chr2
OTX2	5015	orthodenticle homolog 2 (Drosophila)	109,06	chr14
OVOL1	5017	ovo-like 1(Drosophila)	2,23	chr11
OVOL2	58495	ovo-like 2 (Drosophila) /// ovo-like 2 (Drosophila)	9,10	chr20
OVOS2	144203	ovostatin 2	14,87	chr12
P15RS	55197	Hypothetical protein FLJ10656	3,06	chr18
P2RX5	5026	purinergic receptor P2X, ligand-gated ion channel, 5	2,57	chr17
PABPN1	8106	poly(A) binding protein, nuclear 1	3,57	chr14
PACSIN1	29993	protein kinase C and casein kinase substrate in neurons 1	4,41	chr6
PAFAH1B3	5050	platelet-activating factor acetylhydrolase, isoform Ib, gamma subunit 29kDa	4,04	chr19
PAH	5053	phenylalanine hydroxylase	2,37	chr12
PAICS	10606	phosphoribosylaminoimidazole carboxylase, phosphoribosylaminoimidazole suc	5,00	chr4
PAIP1	10605	poly(A) binding protein interacting protein 1	4,62	chr17
PAIP2	51247	poly(A) binding protein interacting protein 2	3,07	chr5
PAK1	5058	p21/Cdc42/Rac1-activated kinase 1 (STE20 homolog, yeast)	7,56	chr11
PAK1IP1	55003	PAK1 interacting protein 1	4,57	chr6
PAK6	56924	p21(CDKN1A)-activated kinase 6	2,97	chr15
PAN3	255967	PABP1-dependent poly A-specific ribonuclease subunit PAN3	4,92	chr13
PANK1	53354	pantothenate kinase 1	7,37	chr10
PANK2	80025	pantothenate kinase 2 (Hallervorden-Spatz syndrome)	2,24	chr20
PAPD1	55149	PAP associated domain containing 1	5,61	chr10
PAPLN	89932	papilin, proteoglycan-like sulfated glycoprotein	7,08	chr14
PAPOLG	64895	poly(A) polymerase gamma	2,62	chr2
PAQR5	54852	progestin and adipoQ receptor family member V	2,63	chr15
PAQR8	85315	progestin and adipoQ receptor family member VIII	4,28	chr6
PAQR9	344838	progestin and adipoQ receptor family member IX	2,05	chr3
PARD3	56288	par-3 partitioning defective 3 homolog (C. elegans)	2,54	chr10
PARD6A	50855	par-6 partitioning defective 6 homolog alpha (C.elegans)	3,68	chr16
PARD6B	84612	par-6 partitioning defective 6 homolog beta (C. elegans)	19,92	chr20
PARP1	142	poly (ADP-ribose) polymerase family, member 1	6,38	chr1
PARP2	10038	poly (ADP-ribose) polymerase family, member 2	3,20	chr14
PARP8	79668	poly (ADP-ribose) polymerase family, member 8	2,00	chr5
PARS2	25973	prolyl-tRNA synthetase (mitochondrial)(putative)	2,99	chr1
PASK	23178	PAS domain containing serine/threonine kinase	8,67	chr2
PAXIP1	22976	PAX interacting (with transcription-activation domain) protein 1	5,23	chr7
PBP	5037	prostatic binding protein	4,38	chr12
PBX1	5087	Pre-B-cell leukemia transcription factor 1	9,33	chr1
PBX2	5089	pre-B-cell leukemia transcription factor 2	3,90	chr3
PCBD2	84105	6-pyruvoyl-tetrahydropterin synthase/dimerization cofactor of hepatocyte nuclear	2,75	chr5
PCBP1	5093	poly(rC) binding protein 1	2,78	chr2
PCBP2	5094	Poly(rC) binding protein 2	2,19	chr12
PCCA	5095	propionyl Coenzyme A carboxylase, alpha polypeptide	4,68	chr13
PCCB	5096	propionyl Coenzyme A carboxylase, beta polypeptide	2,79	chr3
PCDH1	5097	protocadherin 1 (cadherin-like 1)	2,22	chr5
PCDH11X	27328 /// 83259	protocadherin 11 X-linked /// protocadherin 11 Y-linked	3,56	chrY

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PCDH8	5100	protocadherin 8	4,56	chr13
PCDHB3	56132	protocadherin beta 3	2,03	chr5
PCDHB5	26167	protocadherin beta 5	6,58	chr5
PCDHGA4	56111	protocadherin gamma subfamily A, 4	2,75	chr5
PCF11	51585	PCF11, cleavage and polyadenylation factor subunit, homolog (S. cerevisiae)	2,51	chr11
PCGF3	10336	Polycomb group ring finger 3	2,49	chr4
PCGF6	84108	polycomb group ring finger 6 /// polycomb group ring finger 6	2,85	chr10
PCLO	27445	piccolo (presynaptic cytomatrix protein)	2,53	chr7
PCM1	5108	Pericentriolar material 1	2,32	chr8
PCMTD2	55251	protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 2	2,40	chr20
PCNA	5111	proliferating cell nuclear antigen	3,78	chr20
PCNT1	79902	pericentrin 1	4,18	chr17
PCNXL2	80003	Pecanex-like 2 (Drosophila)	2,79	chr1
PCSK9	255738	proprotein convertase subtilisin/kexin type 9	8,12	chr1
PCTP	58488	phosphatidylcholine transfer protein	3,42	chr17
PCYT1B	9468	phosphate cytidylyltransferase 1, choline, beta	4,48	chrX
PDCD11	22984	programmed cell death 11	4,98	chr10
PDCD2	5134	programmed cell death 2	3,52	chr6
PDCD5	9141	programmed cell death 5	2,13	chr19
PDCD6	10016	Programmed cell death 6	5,13	chr5
PDCD6	10016 /// 440997	programmed cell death 6 /// hypothetical gene supported by AK055127; BC0535	4,21	chr5
PDCL	5082	phosducin-like	2,38	chr9
PDCL3	285359 /// 79031	phosducin-like 3 /// hypothetical protein FLJ12205	2,21	chr2
PDE3B	5140	Phosphodiesterase 3B, cGMP-inhibited	2,18	chr11
PDE6D	5147	phosphodiesterase 6D, cGMP-specific, rod, delta	2,17	chr2
PDE7A	5150	phosphodiesterase 7A	7,01	chr8
PDE9A	5152	phosphodiesterase 9A	8,87	chr21
PDF	64146 /// 84342	peptide deformylase-like protein /// component of oligomeric golgi complex 8	3,26	chr16
PDHA1	5160	pyruvate dehydrogenase (lipoamide) alpha 1	3,32	chrX
PDK3	5165	pyruvate dehydrogenase kinase, isoenzyme 3	6,76	chrX
PDPN	10630	podoplanin	7,08	chr1
PDPR	55066	pyruvate dehydrogenase phosphatase regulatory subunit	3,05	chr16
PDXP	57026	pyridoxal (pyridoxine, vitamin B6) phosphatase	3,06	chr22
PDZK3	23037	PDZ domain containing 3	6,21	chr5
PDZK4	57595	PDZ domain containing 4	4,51	chrX
PELI1	57162	pellino homolog 1 (Drosophila)	6,44	chr2
PELI2	57161	pellino homolog 2 (Drosophila)	3,17	chr14
PELP1	27043	proline-, glutamic acid-, leucine-rich protein 1	2,28	chr17
PEMT	10400	phosphatidylethanolamine N-methyltransferase	2,25	chr17
PEO1	56652	progressive external ophthalmoplegia 1	4,73	chr10
PET112L	5188	PET112-like (yeast)	2,29	chr4
PEX1	5189	peroxisome biogenesis factor 1	2,27	chr7
PEX13	5194	peroxisome biogenesis factor 13	3,85	chr2
PEX5	5830	peroxisomal biogenesis factor 5	2,16	chr12
PFAS	5198	phosphoribosylformylglycinamidine synthase (FGAR amidotransferase)	7,80	chr17
PFDN4	5203	prefoldin 4	2,40	chr20
PFKFB2	5208	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 2	2,03	chr1
Pfs2	51659	DNA replication complex GINS protein PSF2	8,81	chr16
PGAP1	80055	GPI deacylase	3,02	chr2
PGBD5	79605	piggyBac transposable element derived 5	8,97	chr1
PGGT1B	5229	Protein geranylgeranyltransferase type I, beta subunit	2,47	chr5
PGM2L1	283209	phosphoglucomutase 2-like 1	2,53	chr11
PHACTR2	9749	phosphatase and actin regulator 2	2,86	chr6
PHB	5245	prohibitin	2,96	chr16
PHC1	1911	polyhomeotic-like 1 (Drosophila)	34,21	chr12
PHF10	55274	PHD finger protein 10	2,83	chr6
PHF13	148479	PHD finger protein 13	2,46	chr1
PHF14	9678	PHD finger protein 14	3,30	chr7
PHF15	23338	PHD finger protein 15	5,57	chr5
PHF16	9767	PHD finger protein 16	3,37	chrX
PHF17	79960	PHD finger protein 17	11,39	chr4
PHF20	51230	PHD finger protein 20	2,15	chr20
PHF21B	112885	PHD finger protein 21B	8,54	chr22
PHF3	23469	PHD finger protein 3	2,77	chr6
PHF5A	84844	PHD finger protein 5A	4,32	chr22
PHGDH	26227	phosphoglycerate dehydrogenase	4,25	chr1
PHIP	55023	pleckstrin homology domain interacting protein	4,67	chr6

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PHKA2	5256	phosphorylase kinase, alpha 2 (liver)	2,08	chrX
PHLPP	23239	PH domain and leucine rich repeat protein phosphatase	5,94	chr18
PHLPPL	23035	PH domain and leucine rich repeat protein phosphatase-like	2,68	chr16
PHOSPHO2	493911	phosphatase, orphan 2	5,66	chr2
PIAS2	9063	Protein inhibitor of activated STAT, 2	4,28	chr18
PIAS4	51588	protein inhibitor of activated STAT, 4	2,46	chr19
PIG8	9702	translokin	3,57	chr11
PIGW	284098	phosphatidylinositol glycan, class W	2,47	chr17
PIK3C2A	5286	Phosphoinositide-3-kinase, class 2, alpha polypeptide	2,33	chr11
PIK3CB	5291	phosphoinositide-3-kinase, catalytic, beta polypeptide	2,44	chr3
PIK3R4	30849	phosphoinositide-3-kinase, regulatory subunit 4, p150	2,72	chr3
PILRB	29990	paired immunoglobin-like type 2 receptor beta	3,19	chr7
PIM2	11040	pim-2 oncogene	4,49	chrX
PINX1	54984	PIN2-interacting protein 1	3,46	chr8
PIP5K1B	8395	phosphatidylinositol-4-phosphate 5-kinase, type I, beta	3,25	chr9
PIP5K2A	5305	Phosphatidylinositol-4-phosphate 5-kinase, type II, alpha	3,48	chr10
PIPOX	51268	pipecolic acid oxidase	10,59	chr17
PIR	8544	pirin (iron-binding nuclear protein)	5,24	chrX
PISD	23761	phosphatidylserine decarboxylase	2,36	chr22
PITPNC1	26207	phosphatidylinositol transfer protein, cytoplasmic 1	4,84	chr17
PKN3	29941	protein kinase N3	2,76	chr9
PKP4	8502	Plakophilin 4	2,54	chr2
PLA2G3	50487	phospholipase A2, group III	2,37	chr22
PLA2G4B	8681	phospholipase A2, group IVB (cytosolic)	2,51	chr15
PLA2G7	7941	phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma)	3,06	chr6
PLAGL2	5326	pleiomorphic adenoma gene-like 2	2,75	chr20
PLCG1	5335	phospholipase C, gamma 1	2,38	chr20
PLCL2	23228	phospholipase C-like 2	9,56	chr3
PLCL3	23007	phospholipase C-like 3	8,50	chr3
PLCXD1	55344	phosphatidylinositol-specific phospholipase C, X domain containing 1	6,35	chrX
PLEKHA5	54477	Pleckstrin homology domain containing, family A member 5	8,88	chr12
PLEKHA8	84725	Pleckstrin homology domain containing, family A (phosphoinositide binding spec	2,94	chr7
PLEKHA9	51054 /// 84725	pleckstrin homology domain containing, family A (phosphoinositide binding spec	2,20	chr7
PLEKHB1	58473	pleckstrin homology domain containing, family B (evectins) member 1	2,32	chr11
PLEKHH1	57475	pleckstrin homology domain containing, family H (with MyTH4 domain) member	10,69	chr14
PLEKHJ1	55111	pleckstrin homology domain containing, family J member 1	3,88	chr19
PLEKHK1	219790	pleckstrin homology domain containing, family K member 1	2,19	chr10
PLEKHM1	9842	Pleckstrin homology domain containing, family M (with RUN domain) member 1	2,10	chr17
PLK1	5347	Polo-like kinase 1 (Drosophila)	7,40	chr16
PLK4	10733	polo-like kinase 4 (Drosophila)	13,11	chr4
PLP1	5354	proteolipid protein 1 (Pelizaeus-Merzbacher disease, spastic paraplegia 2, uncor	13,04	chrX
PLS1	5357	plastin 1 (I isoform)	11,22	chr3
PLSCR1	5359	phospholipid scramblase 1	3,75	chr3
PMAIP1	5366	phorbol-12-myristate-13-acetate-induced protein 1	3,05	chr18
PMF1	11243	polyamine-modulated factor 1	3,84	chr1
PMPCB	9512	peptidase (mitochondrial processing) beta	2,07	chr7
PMS1	5378	PMS1 postmeiotic segregation increased 1 (S. cerevisiae)	3,95	chr2
PMS2L1	5379 /// 5383	postmeiotic segregation increased 2-like 1 /// postmeiotic segregation increased	2,16	chr7
PMS2L3	5387	postmeiotic segregation increased 2-like 3	2,04	chr7
PNKP	11284	polynucleotide kinase 3'-phosphatase	2,24	chr19
PNN	5411	pinin, desmosome associated protein	4,69	chr14
PNPT1	87178	polyribonucleotide nucleotidyltransferase 1	3,59	chr2
PNRC2	55629	proline-rich nuclear receptor coactivator 2	2,59	chr1
PODXL	5420	podocalyxin-like	59,45	chr7
POLA	5422	polymerase (DNA directed), alpha	8,59	chrX
POLA2	23649	polymerase (DNA directed), alpha 2 (70kD subunit)	2,45	chr11
POLB	5423	polymerase (DNA directed), beta	2,14	chr8
POLD1	5424	polymerase (DNA directed), delta 1, catalytic subunit 125kDa	6,28	chr19
POLD2	5425	polymerase (DNA directed), delta 2, regulatory subunit 50kDa	2,34	chr7
POLD3	10714	polymerase (DNA-directed), delta 3, accessory subunit	4,51	chr11
POLDIP3	84271	polymerase (DNA-directed), delta interacting protein 3	2,08	chr22
POLE	5426	polymerase (DNA directed), epsilon	5,23	chr12
POLE2	5427	polymerase (DNA directed), epsilon 2 (p59 subunit)	10,68	chr14
POLG2	11232	polymerase (DNA directed), gamma 2, accessory subunit	4,50	chr17
POLI	11201	polymerase (DNA directed) iota	2,73	chr18
POLQ	10721	polymerase (DNA directed), theta	5,72	chr3
POLR1A	25885	polymerase (RNA) I polypeptide A, 194kDa	3,58	chr2

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POLR1B	84172	polymerase (RNA) I polypeptide B, 128kDa	**4,79**	chr2
POLR1C	9533	polymerase (RNA) I polypeptide C, 30kDa	**2,50**	chr6
POLR1D	51082	polymerase (RNA) I polypeptide D, 16kDa	**5,54**	chr13
POLR2D	5433	polymerase (RNA) II (DNA directed) polypeptide D	**3,68**	chr2
POLR2F	5435	polymerase (RNA) II (DNA directed) polypeptide F	**2,75**	chr22
POLR2G	5436	polymerase (RNA) II (DNA directed) polypeptide G	**2,07**	chr11
POLR2H	5437	polymerase (RNA) II (DNA directed) polypeptide H	**2,93**	chr3
POLR2I	5438	polymerase (RNA) II (DNA directed) polypeptide I, 14.5kDa	**3,54**	chr19
POLR3A	11128	polymerase (RNA) III (DNA directed) polypeptide A, 155kDa	**2,05**	chr10
POLR3E	55718	polymerase (RNA) III (DNA directed) polypeptide E (80kD)	**3,14**	chr16
POLR3G	10622	Polymerase (RNA) III (DNA directed) polypeptide G (32kD)	**8,94**	chr5
POLR3K	51728	polymerase (RNA) III (DNA directed) polypeptide K, 12.3 kDa	**8,19**	chr16
POLRMT	5442	polymerase (RNA) mitochondrial (DNA directed)	**4,45**	chr17
POP4	10775	Processing of precursor 4, ribonuclease P/MRP subunit (S. cerevisiae)	**2,49**	chr19
POP7	10248	processing of precursor 7, ribonuclease P subunit (S. cerevisiae)	**4,58**	chr7
POR	5447	P450 (cytochrome) oxidoreductase	**3,75**	chr7
POU2F1	5451	POU domain, class 2, transcription factor 1	**7,47**	chr1
POU5F1	628 /// 5460 /// 5	POU domain, class 5, transcription factor 1 /// POU domain, class 5, transcriptio	**118,37**	chr1
PPA2	27068	pyrophosphatase (inorganic) 2	**2,02**	chr4
PPAN	56342	peter pan homolog (Drosophila)	**3,84**	chr19
PPAP2A	8611	phosphatidic acid phosphatase type 2A	**2,36**	chr5
PPAP2C	8612	phosphatidic acid phosphatase type 2C	**9,07**	chr19
PPARBP	5469	PPAR binding protein	**2,34**	chr17
PPAT	5471	phosphoribosyl pyrophosphate amidotransferase	**6,66**	chr4
PPCDC	60490	phosphopantothenoylcysteine decarboxylase	**6,07**	chr15
PPFIA1	8500	Protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting p	**2,15**	chr11
PPHLN1	51535	periphilin 1	**2,19**	chr12
PPID	5481	peptidylprolyl isomerase D (cyclophilin D)	**2,95**	chr4
PPIG	9360	peptidyl-prolyl isomerase G (cyclophilin G)	**2,77**	chr2
PPIH	10465	peptidyl prolyl isomerase H (cyclophilin H)	**4,21**	chr1
PPIL1	51645	peptidylprolyl isomerase (cyclophilin)-like 1	**3,35**	chr6
PPIL5	122769	peptidylprolyl isomerase (cyclophilin)-like 5	**3,66**	chr14
PPL	5493	periplakin	**9,49**	chr16
PPM1B	5495	protein phosphatase 1B (formerly 2C), magnesium-dependent, beta isoform	**4,87**	chr2
PPM1E	22843	protein phosphatase 1E (PP2C domain containing)	**15,90**	chr17
PPM1G	5496	protein phosphatase 1G (formerly 2C), magnesium-dependent, gamma isoform	**4,48**	chr2
PPM1H	57460	protein phosphatase 1H (PP2C domain containing)	**11,60**	chr12
PPM1J	333926	protein phosphatase 1J (PP2C domain containing)	**2,97**	chr1
PPM1L	151742	Protein phosphatase 1 (formerly 2C)-like	**3,64**	chr3
PPOX	5498	protoporphyrinogen oxidase	**2,60**	chr1
PPP1CC	5501	protein phosphatase 1, catalytic subunit, gamma isoform	**2,51**	chr12
PPP1R10	5514	protein phosphatase 1, regulatory subunit 10	**2,44**	chr6
PPP1R13B	23368	Protein phosphatase 1, regulatory (inhibitor) subunit 13B	**23,43**	chr10
PPP1R14B	26472	protein phosphatase 1, regulatory (inhibitor) subunit 14B	**2,64**	chr22
PPP1R16B	26051	protein phosphatase 1, regulatory (inhibitor) subunit 16B	**4,20**	chr20
PPP1R1A	5502	protein phosphatase 1, regulatory (inhibitor) subunit 1A	**2,31**	chr12
PPP1R9A	55607	Protein phosphatase 1, regulatory (inhibitor) subunit 9A	**21,83**	chr7
PPP2R1B	5519	protein phosphatase 2 (formerly 2A), regulatory subunit A (PR 65), beta isoform	**8,56**	chr11
PPP2R2A	5520	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform	**2,80**	chr8
PPP2R2B	5521	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), beta isoform	**29,75**	chr5
PPP2R2C	5522	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), gamma isofo	**2,15**	chr4
PPP2R3B	28227	protein phosphatase 2 (formerly 2A), regulatory subunit B'', beta	**3,04**	chrY
PPP2R5A	5525	protein phosphatase 2, regulatory subunit B (B56), alpha isoform	**2,06**	chr1
PPP3CA	5530	Protein phosphatase 3 (formerly 2B), catalytic subunit, alpha isoform (calcineurin	**2,69**	chr4
PPP3R1	5534	Protein phosphatase 3 (formerly 2B), regulatory subunit B, 19kDa, alpha isoform	**2,65**	chr2
PPP6C	5537	Protein phosphatase 6, catalytic subunit	**2,96**	chr9
PPRC1	23082	peroxisome proliferative activated receptor, gamma, coactivator-related 1	**2,98**	chr10
PPT1	5538	palmitoyl-protein thioesterase 1 (ceroid-lipofuscinosis, neuronal 1, infantile)	**3,94**	chr1
PPWD1	23398	peptidylprolyl isomerase domain and WD repeat containing 1	**3,43**	chr5
PQBP1	10084	polyglutamine binding protein 1	**2,70**	chrX
PRCC	5546	papillary renal cell carcinoma (translocation-associated)	**2,19**	chr1
PRDM10	56980	PR domain containing 10	**2,22**	chr11
PRDM14	63978	PR domain containing 14	**14,71**	chr8
PRDX1	5052	peroxiredoxin 1	**2,62**	chr1
PREP	5550	Prolyl endopeptidase	**2,48**	chr6
PRIM1	5557	primase, polypeptide 1, 49kDa	**25,84**	chr12
PRIMA1	145270	Proline rich membrane anchor 1	**4,43**	chr14

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PRKAA2	5563	Protein kinase, AMP-activated, alpha 2 catalytic subunit	3,58	chr1
PRKAR1A	5573	protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extingu	2,65	chr17
PRKAR1B	5575	Protein kinase, cAMP-dependent, regulatory, type I, beta	6,61	chr21
PRKAR2B	5577	protein kinase, cAMP-dependent, regulatory, type II, beta	7,32	chr7
PRKCA	5578	Homo sapiens, clone IMAGE:4103364, mRNA /// Protein kinase C, alpha	2,48	chr15
PRKCB1	5579	protein kinase C, beta 1	7,43	chr16
PRKCBP1	23613	protein kinase C binding protein 1	4,07	chr20
PRKCQ	5588	protein kinase C, theta	7,06	chr10
PRKCZ	5590	protein kinase C, zeta	11,48	chr1
PRKD2	25865	protein kinase D2	2,17	chr19
PRKD3	23683	protein kinase D3 /// protein kinase D3	2,05	chr2
PRKX	5613	protein kinase, X-linked	4,27	chrX
PRKX	5613 /// 5616	protein kinase, X-linked /// protein kinase, Y-linked	3,33	chrX
PRMT7	54496	protein arginine N-methyltransferase 7	2,63	chr16
PRO1580	55374	hypothetical protein PRO1580	3,28	chr5
PRO1843	55378	hypothetical protein PRO1843	4,60	chr3
PRO1853	55471	hypothetical protein PRO1853	5,29	chr2
PRO2852	114224	hypothetical protein PRO2852	2,69	chr9
PRODH	5625	proline dehydrogenase (oxidase) 1	7,54	chr22
PROM1	8842	prominin 1	54,82	chr4
PRPF19	27339	PRP19/PSO4 pre-mRNA processing factor 19 homolog (S. cerevisiae)	2,90	chr11
PRPF38A	84950	PRP38 pre-mRNA processing factor 38 (yeast) domain containing A	4,62	chr1
PRPF38B	55119	PRP38 pre-mRNA processing factor 38 (yeast) domain containing B	2,84	chr1
PRPF40A	55660	PRP40 pre-mRNA processing factor 40 homolog A (yeast)	2,22	chr2
PRPF4B	8899	PRP4 pre-mRNA processing factor 4 homolog B (yeast)	2,16	chr6
PRPS2	5634	Phosphoribosyl pyrophosphate synthetase 2	2,22	chrX
PRPSAP2	5636	phosphoribosyl pyrophosphate synthetase-associated protein 2	2,30	chr17
PRR6	201161	proline rich 6	11,50	chr17
PRRG4	79056	Proline rich Gla (G-carboxyglutamic acid) 4 (transmembrane)	2,63	chr11
PRSS15	9361	protease, serine, 15	2,27	chr19
PRSS16	10279	protease, serine, 16 (thymus)	6,65	chr6
PRSS8	5652	protease, serine, 8 (prostasin)	5,16	chr16
PRTG	283659	Protogenin homolog (Gallus gallus)	9,91	chr15
PRUNE	58497	prune homolog (Drosophila)	2,65	chr1
PSARL	55486	presenilin associated, rhomboid-like	2,34	chr6
PSEN2	5664	presenilin 2 (Alzheimer disease 4)	2,29	chr1
PSF1	9837	DNA replication complex GINS protein PSF1	13,11	chr20
PSIP1	11168	PC4 and SFRS1 interacting protein 1	12,30	chr9
PSMA2	5683	proteasome (prosome, macropain) subunit, alpha type, 2	4,09	chr7
PSMA3	5684	proteasome (prosome, macropain) subunit, alpha type, 3	2,70	chr14
PSMB1	5689	proteasome (prosome, macropain) subunit, beta type, 1	2,00	chr6
PSMB4	5692	proteasome (prosome, macropain) subunit, beta type, 4	2,31	chr1
PSMB6	5694	proteasome (prosome, macropain) subunit, beta type, 6	2,11	chr17
PSMC4	5704	proteasome (prosome, macropain) 26S subunit, ATPase, 4	2,02	chr19
PSMD11	5717	proteasome (prosome, macropain) 26S subunit, non-ATPase, 11	3,40	chr17
PSMD3	5709	proteasome (prosome, macropain) 26S subunit, non-ATPase, 3	2,07	chr17
PSME4	23198	Proteasome (prosome, macropain) activator subunit 4	2,83	chr2
PSPC1	55269	Paraspeckle component 1	2,35	chr13
PSPC1	374491 /// 55269	paraspeckle component 1 /// TPTE and PTEN homologous inositol lipid phospha	3,73	chr13
PSRC1	84722	proline/serine-rich coiled-coil 1	6,19	chr1
PTBP1	5725	polypyrimidine tract binding protein 1	3,72	chr19
PTBP2	58155	Polypyrimidine tract binding protein 2	4,28	chr1
PTCD1	26024	pentatricopeptide repeat domain 1	2,88	chr7
PTCH	5727	patched homolog (Drosophila)	13,40	chr9
PTCHD1	139411	patched domain containing 1	2,43	chrX
PTER	9317	phosphotriesterase related	2,80	chr10
PTGES3	10728	prostaglandin E synthase 3 (cytosolic)	3,00	chr2
PTMA	5757	prothymosin, alpha (gene sequence 28)	4,00	chr2
PTMA	441454 /// 44145	prothymosin, alpha (gene sequence 28) /// similar to prothymosin alpha /// hypot	2,40	chr3
PTOV1	53635	prostate tumor overexpressed gene 1	2,03	chr19
PTPMT1	114971	protein tyrosine phosphatase, mitochondrial 1	2,52	chr11
PTPN2	5771	protein tyrosine phosphatase, non-receptor type 2	5,52	chr13
PTPN4	5775	protein tyrosine phosphatase, non-receptor type 4 (megakaryocyte)	5,52	chr2
PTPN5	84867	protein tyrosine phosphatase, non-receptor type 5 (striatum-enriched)	5,93	chr11
PTPN6	5777	protein tyrosine phosphatase, non-receptor type 6	4,52	chr12
PTPRD	5789	Protein tyrosine phosphatase, receptor type, D	15,44	chr9
PTPRG	5793	Protein tyrosine phosphatase, receptor type, G	2,86	chr3

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PTPRS	5802	Protein tyrosine phosphatase, receptor type, S	**2,66**	chr19
PTPRZ1	5803	protein tyrosine phosphatase, receptor-type, Z polypeptide 1	**176,52**	chr7
PTTG1	9232	pituitary tumor-transforming 1	**4,18**	chr5
PUM2	23369	Pumilio homolog 2 (Drosophila)	**2,88**	chr2
PUNC	9543	putative neuronal cell adhesion molecule	**9,73**	chr15
PUS1	80324	pseudouridylate synthase 1	**5,16**	chr12
PUS3	83480	pseudouridylate synthase 3 /// pseudouridylate synthase 3	**2,33**	chr11
PWP2H	5822	PWP2 periodic tryptophan protein homolog (yeast)	**5,31**	chr21
PX19	27166	px19-like protein	**2,81**	chr1
PYCARD	29108	PYD and CARD domain containing	**5,75**	chr16
PYCR2	29920	pyrroline-5-carboxylate reductase family, member 2	**3,58**	chr1
QPRT	23475	quinolinate phosphoribosyltransferase (nicotinate-nucleotide pyrophosphorylase	**3,98**	chr16
QRSL1	55278	glutaminyl-tRNA synthase (glutamine-hydrolyzing)-like 1	**3,82**	chr6
QTRT1	81890	queuine tRNA-ribosyltransferase 1 (tRNA-guanine transglycosylase) /// queuine	**2,77**	chr19
QTRTD1	79691	queuine tRNA-ribosyltransferase domain containing 1	**5,44**	chr3
RAB11FIP4	84440	RAB11 family interacting protein 4 (class II)	**7,60**	chr17
RAB12	201475	RAB12, member RAS oncogene family	**6,19**	chr18
RAB15	376267	RAB15, member RAS onocogene family	**7,10**	chr14
RAB20	55647	RAB20, member RAS oncogene family	**7,07**	chr13
RAB25	57111	RAB25, member RAS oncogene family	**6,71**	chr1
RAB38	23682	RAB38, member RAS oncogene family	**11,31**	chr11
RAB39B	116442	RAB39B, member RAS oncogene family	**5,31**	chrX
RAB3D	9545	RAB3D, member RAS oncogene family	**4,14**	chr19
RAB3IP	117177	RAB3A interacting protein (rabin3)	**4,41**	chr12
RAB6B	51560	RAB6B, member RAS oncogene family	**2,41**	chr3
RAB9A	9367	RAB9A, member RAS oncogene family	**2,28**	chrX
RABGAP1L	9910	RAB GTPase activating protein 1-like	**11,26**	chr1
RABL4	11020	RAB, member of RAS oncogene family-like 4	**2,51**	chr22
RACGAP1	29127	Rac GTPase activating protein 1	**2,02**	chr12
RAD17	5884	RAD17 homolog (S. pombe)	**2,44**	chr5
RAD23B	5887	RAD23 homolog B (S. cerevisiae)	**2,03**	chr9
RAD50	10111	RAD50 homolog (S. cerevisiae)	**3,34**	chr5
RAD51	5888	RAD51 homolog (RecA homolog, E. coli) (S. cerevisiae)	**7,17**	chr15
RAD51AP1	10635	RAD51 associated protein 1	**9,26**	chr12
RAD54B	25788	RAD54 homolog B (S. cerevisiae)	**3,48**	chr8
RAD54L	8438	RAD54-like (S. cerevisiae)	**5,69**	chr1
RAE1	8480	RAE1 RNA export 1 homolog (S. pombe)	**2,45**	chr20
RAF1	5894	V-raf-1 murine leukemia viral oncogene homolog 1	**2,51**	chr3
RALGPS1	9649	Ral GEF with PH domain and SH3 binding motif 1	**3,24**	chr9
RAN	5901	RAN, member RAS oncogene family	**2,42**	chr6
RANBP1	5902	RAN binding protein 1	**4,44**	chr22
RANBP2	5903	RAN binding protein 2	**3,58**	chr2
RANBP5	3843	RAN binding protein 5	**2,48**	chr13
RANGAP1	5905	Ran GTPase activating protein 1	**2,86**	chr22
RANGNRF	29098	RAN guanine nucleotide release factor	**2,81**	chr17
RAPGEF5	9771	Rap guanine nucleotide exchange factor (GEF) 5	**5,10**	chr7
RARRES2	5919	retinoic acid receptor responder (tazarotene induced) 2	**76,23**	chr7
RASEF	158158	RAS and EF-hand domain containing	**13,45**	chr9
RASGEF1A	221002	RasGEF domain family, member 1A	**22,42**	chr10
RASGEF1B	153020	RasGEF domain family, member 1B	**3,18**	chr4
RASGRP2	10235	RAS guanyl releasing protein 2 (calcium and DAG-regulated)	**2,89**	chr11
RASIP1	54922	Ras interacting protein 1	**2,03**	chr19
RASL11B	65997	RAS-like, family 11, member B	**28,53**	chr4
RASL12	51285	RAS-like, family 12	**2,14**	chr15
RASSF2	9770	Ras association (RalGDS/AF-6) domain family 2	**2,22**	chr20
RB1CC1	9821	RB1-inducible coiled-coil 1	**2,90**	chr8
RBBP4	5928	retinoblastoma binding protein 4	**3,31**	chr1
RBBP6	5930	retinoblastoma binding protein 6	**3,00**	chr16
RBBP7	5931	Retinoblastoma binding protein 7	**6,06**	chrX
RBBP8	5932	retinoblastoma binding protein 8	**4,19**	chr18
RBM10	8241	RNA binding motif protein 10	**3,51**	chrX
RBM12	10137	RNA binding motif protein 12	**3,28**	chr20
RBM12B	389677	RNA binding motif protein 12B	**3,78**	chr8
RBM13	84549	RNA binding motif protein 13 /// RNA binding motif protein 13	**2,75**	chr8
RBM14	10432	RNA binding motif protein 14	**4,85**	chr11
RBM15	64783	RNA binding motif protein 15	**2,87**	chr1
RBM15B	29890	RNA binding motif protein 15B	**2,72**	chr3

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RBM17	84991	RNA binding motif protein 17	**2,98**	chr10
RBM19	9904	RNA binding motif protein 19	**2,45**	chr12
RBM25	58517	RNA binding motif protein 25	**3,43**	chr14
RBM27	54439	RNA binding motif protein 27	**2,61**	chr5
RBM28	55131	RNA binding motif protein 28	**2,43**	chr7
RBM35A	54845	RNA binding motif protein 35A	**119,95**	chr8
RBM35B	80004	RNA binding motif protein 35B	**9,27**	chr16
RBM4	5936	RNA binding motif protein 4	**2,16**	chr11
RBM6	10180	RNA binding motif protein 6	**3,27**	chr3
RBM8A	9939	RNA binding motif protein 8A	**3,52**	chr1
RBMX	27316	RNA binding motif protein, X-linked	**4,34**	chr9
RBMXL1	494115	RNA binding motif protein, X-linked-like 1	**2,39**	chr1
RBP1	5947	retinol binding protein 1, cellular	**4,50**	chr3
RBP7	116362	retinol binding protein 7, cellular	**2,91**	chr1
RBPMS	11030	RNA binding protein with multiple splicing	**5,28**	chr8
RBPMS2	348093	RNA binding protein with multiple splicing 2	**85,61**	chr15
RBPSUH	3516	recombining binding protein suppressor of hairless (Drosophila)	**3,12**	chr4
RC74	55756	related to CPSF subunits 74 kDa	**3,24**	chr8
RCBTB2	1102	regulator of chromosome condensation (RCC1) and BTB (POZ) domain contain	**2,16**	chr13
RCC1	1104	regulator of chromosome condensation 1	**7,95**	chr1
RCC2	55920	regulator of chromosome condensation 2	**5,22**	chr11
RCHY1	25898	ring finger and CHY zinc finger domain containing 1	**3,38**	chr4
RCL1	10171	RNA terminal phosphate cyclase-like 1	**2,62**	chr9
RCOR2	283248	REST corepressor 2	**6,56**	chr11
RDH13	112724	retinol dehydrogenase 13 (all-trans and 9-cis)	**3,30**	chr19
REC8L1	9985	REC8-like 1 (yeast)	**9,34**	chr14
RECQL4	9401	RecQ protein-like 4	**8,26**	chr8
REPS1	85021	RALBP1 associated Eps domain containing 1 /// RALBP1 associated Eps doma	**2,78**	chr6
RERE	473	Arginine-glutamic acid dipeptide (RE) repeats	**2,68**	chr1
RET	5979	Ret proto-oncogene (multiple endocrine neoplasia and medullary thyroid carcino	**3,04**	chr10
REXO4	57109	REX4, RNA exonuclease 4 homolog (S. cerevisiae)	**2,52**	chr9
RFC2	5982	replication factor C (activator 1) 2, 40kDa	**4,41**	chr7
RFC3	5983	Replication factor C (activator 1) 3, 38kDa	**5,20**	chr13
RFC4	5984	replication factor C (activator 1) 4, 37kDa	**7,31**	chr3
RFC5	5985	replication factor C (activator 1) 5, 36.5kDa	**4,76**	chr12
RFP2	10206	ret finger protein 2	**2,82**	chr13
RFT1	91869	RFT1 homolog (S. cerevisiae)	**2,74**	chr3
RFWD3	55159	ring finger and WD repeat domain 3	**4,61**	chr16
RFX3	5991	Regulatory factor X, 3 (influences HLA class II expression)	**2,83**	chr9
RFXAP	5994	regulatory factor X-associated protein	**2,30**	chr13
RFXDC2	64864	regulatory factor X domain containing 2	**2,26**	chr15
RG9MTD1	54931	RNA (guanine-9-) methyltransferase domain containing 1	**3,76**	chr3
RGL3	57139	ral guanine nucleotide dissociation stimulator-like 3	**2,13**	chr19
RGS17	26575	regulator of G-protein signalling 17	**3,30**	chr6
RHBDL4	162494	rhomboid, veinlet-like 4 (Drosophila)	**2,24**	chr17
RHEB	6009	Ras homolog enriched in brain	**2,07**	chr7
RHOT2	89941	ras homolog gene family, member T2	**3,02**	chr16
RHPN2	85415	rhophilin, Rho GTPase binding protein 2	**6,35**	chr16
RICS	9743	Rho GTPase-activating protein	**3,57**	chr11
RIF1	55183	RAP1 interacting factor homolog (yeast)	**4,62**	chr2
RIMS2	9699	Regulating synaptic membrane exocytosis 2	**6,68**	chr8
RIMS3	9783	regulating synaptic membrane exocytosis 3	**9,28**	chr1
RIOK1	83732	RIO kinase 1 (yeast) /// RIO kinase 1 (yeast)	**2,42**	chr6
RIP	84268	RPA interacting protein	**2,17**	chr17
RIPK4	54101	receptor-interacting serine-threonine kinase 4	**2,90**	chr21
RLF	6018	rearranged L-myc fusion	**2,42**	chr1
RMST	196475	Rhabdomyosarcoma 2 associated transcript (non-coding RNA)	**6,98**	chr12
RNASEH2A	10535	ribonuclease H2, large subunit	**9,22**	chr19
RNASEN	29102	ribonuclease III, nuclear	**2,40**	chr5
RND1	27289	Rho family GTPase 1	**2,96**	chr12
RND2	8153	Rho family GTPase 2	**8,85**	chr17
RNF10	9921	Ring finger protein 10	**5,28**	chr12
RNF125	54941	ring finger protein 125	**3,99**	chr18
RNF130	55819	Ring finger protein 130	**3,52**	chr5
RNF138	51444	ring finger protein 138	**5,66**	chr18
RNF175	285533	ring finger protein 175	**7,07**	chr4
RNF184	55167	ring finger protein 184	**2,83**	chr3

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RNF26	79102	ring finger protein 26	**3,54**	chr11
RNF38	152006	ring finger protein 38	**2,88**	chr9
RNF44	22838	ring finger protein 44	**6,28**	chr5
RNF5	6048	ring finger protein 5	**2,82**	chr6
RNF8	9025	ring finger protein 8	**3,38**	chr6
RNMTL1	55178	RNA methyltransferase like 1	**2,41**	chr17
RNPC2	9584	RNA-binding region (RNP1, RRM) containing 2	**2,00**	chr20
RNPS1	10921	RNA binding protein S1, serine-rich domain	**2,81**	chr4
RNU22	9304	RNA, U22 small nucleolar	**4,21**	chr11
RNU3IP2	9136	RNA, U3 small nucleolar interacting protein 2	**4,43**	chr3
RNU47	26802	RNA, U47 small nuclear	**2,22**	chr1
ROR1	4919	receptor tyrosine kinase-like orphan receptor 1	**7,53**	chr1
RORA	6095	RAR-related orphan receptor A	**2,80**	chr15
RP1-112K5.2	90121	hypothetical protein DT1P1A10	**2,20**	chrX
RP11-311P8.3	139596	hypothetical protein MGC23937 similar to CG4798	**2,41**	chrX
RP11-50D16.3	387921	Similar to RIKEN cDNA 8030451K01	**2,07**	chr13
RPA1	6117	replication protein A1, 70kDa	**2,84**	chr17
RPA2	6118	replication protein A2, 32kDa	**4,11**	chr1
RPA3	6119	replication protein A3, 14kDa	**6,57**	chr7
RPAP1	26015	RNA polymerase II associated protein 1	**2,62**	chr15
RPL18A	390354 /// 6142	ribosomal protein L18a /// similar to ribosomal protein L18a; 60S ribosomal prote	**2,20**	chr1
RPL39L	116832	ribosomal protein L39-like	**3,02**	chr3
RPP30	10556	ribonuclease P/MRP 30kDa subunit	**3,40**	chr10
RPP38	10557	ribonuclease P/MRP 38kDa subunit	**2,18**	chr10
RPP40	10799	ribonuclease P 40kDa subunit	**2,42**	chr6
RPRM	56475	reprimo, TP53 dependant G2 arrest mediator candidate	**5,85**	chr2
RPS21	6227	ribosomal protein S21	**2,23**	chr20
RPS24	6229	Ribosomal protein S24	**2,43**	chr10
RPS6	6194	Ribosomal protein S6	**5,12**	chr9
RPS6KA1	6195	ribosomal protein S6 kinase, 90kDa, polypeptide 1	**5,70**	chr1
RPS6KA5	9252	ribosomal protein S6 kinase, 90kDa, polypeptide 5	**2,03**	chr14
RPS7	6201	ribosomal protein S7 /// ribosomal protein S7	**2,01**	chr2
RPUSD2	27079	RNA pseudouridylate synthase domain containing 2	**3,38**	chr15
RPUSD3	285367	RNA pseudouridylate synthase domain containing 3	**2,49**	chr3
RPUSD4	84881	RNA pseudouridylate synthase domain containing 4	**3,89**	chr11
RQCD1	9125	RCD1 required for cell differentiation1 homolog (S. pombe)	**3,02**	chr2
RRAGD	58528	Ras-related GTP binding D	**12,61**	chr6
RREB1	6239	Ras responsive element binding protein 1	**2,08**	chr6
RRM1	6240	ribonucleotide reductase M1 polypeptide	**2,75**	chr11
RRM2	6241	ribonucleotide reductase M2 polypeptide	**7,19**	chr2
RRS1	23212	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)	**5,48**	chr8
RSBN1L	222194	Round spermatid basic protein 1-like	**2,14**	chr7
RSC1A1	6248	regulatory solute carrier protein, family 1, member 1	**3,74**	chr1
RSRC1	51319	arginine/serine-rich coiled-coil 1	**2,44**	chr3
RTKN	6242	rhotekin	**2,79**	chr2
RTN1	6252	reticulon 1	**3,45**	chr14
RTTN	25914	rotatin	**2,22**	chr18
RUNX1T1	862	Runt-related transcription factor 1; translocated to, 1 (cyclin D-related)	**4,66**	chr8
RUVBL1	8607	RuvB-like 1 (E. coli)	**3,17**	chr3
RUVBL2	10856	RuvB-like 2 (E. coli)	**2,17**	chr19
RYBP	23429	RING1 and YY1 binding protein	**5,13**	chr3
RYR1	6261	Ryanodine receptor 1 (skeletal)	**2,89**	chr14
S100PBPR	64766	S100P binding protein Riken	**3,01**	chr1
SAC3D1	29901	SAC3 domain containing 1	**2,22**	chr11
SAE1	10055	SUMO-1 activating enzyme subunit 1	**2,16**	chr11
SAFB	6294	scaffold attachment factor B	**3,67**	chr19
SALL1	6299	sal-like 1 (Drosophila)	**5,39**	chr16
SALL2	6297	sal-like 2 (Drosophila)	**16,27**	chr14
SALL4	57167	sal-like 4 (Drosophila)	**162,24**	chr20
SAMD6	203286	sterile alpha motif domain containing 6	**3,85**	chr9
SAMHD1	25939	SAM domain and HD domain 1	**7,17**	chr20
SANG	149775	GNAS1 antisense	**3,77**	chr20
SAP130	79595	mSin3A-associated protein 130	**2,53**	chr2
SAP18	10284	sin3-associated polypeptide, 18kDa	**2,63**	chr13
SAP30	8819	sin3-associated polypeptide, 30kDa	**2,66**	chr4
SAPS3	55291	SAPS domain family, member 3	**3,88**	chr11
SARS2	54938	seryl-tRNA synthetase 2	**3,45**	chr19

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SART3	9733	squamous cell carcinoma antigen recognised by T cells 3 /// squamous cell carc	4,60	chr12
SASS6	163786	spindle assembly 6 homolog (C. elegans)	2,46	chr1
SATB1	6304	special AT-rich sequence binding protein 1 (binds to nuclear matrix/scaffold-asso	3,11	chr3
SAV1	60485	salvador homolog 1 (Drosophila)	2,46	chr14
SBK1	388228	SH3-binding domain kinase 1	28,31	chr16
SBNO1	55206	Sno, strawberry notch homolog 1 (Drosophila)	2,08	chr12
SC5DL	6309	sterol-C5-desaturase (ERG3 delta-5-desaturase homolog, fungal)-like	2,49	chr11
SCAMP5	192683	secretory carrier membrane protein 5	3,83	chr15
SCAND1	51282	SCAN domain containing 1	2,49	chr20
SCAP	22937	SREBP cleavage-activating protein	4,16	chr3
SCD	6319	stearoyl-CoA desaturase (delta-9-desaturase) /// stearoyl-CoA desaturase (delta	4,64	chr10
SCG3	29106	secretogranin III	21,28	chr15
SCGB3A2	117156	secretoglobin, family 3A, member 2	16,94	chr5
SCLY	51540	selenocysteine lyase	3,60	chr2
SCNN1A	6337	sodium channel, nonvoltage-gated 1 alpha	63,47	chr12
SCNN1G	6340	sodium channel, nonvoltage-gated 1, gamma	2,17	chr16
SCO1	6341	SCO cytochrome oxidase deficient homolog 1 (yeast)	2,67	chr17
SDAD1	55153	SDA1 domain containing 1	2,35	chr4
SDCCAG10	10283	serologically defined colon cancer antigen 10	2,88	chr5
SDCCAG3 ///	10807 /// 388478	serologically defined colon cancer antigen 3 /// serologically defined colon cance	2,55	chr9
SDHC	6391	succinate dehydrogenase complex, subunit C, integral membrane protein, 15kD	2,05	chr1
SEC11L1	23478	SEC11-like 1 (S. cerevisiae)	2,40	chr8
SEC11L3	90701	SEC11-like 3 (S. cerevisiae)	2,96	chr18
SEC14L5	9717	SEC14-like 5 (S. cerevisiae)	2,13	chr16
SEC22L3	9117	SEC22 vesicle trafficking protein-like 3 (S. cerevisiae) /// SEC22 vesicle trafficki	3,01	chr3
SEC5L1	55770	SEC5-like 1 (S. cerevisiae)	2,21	chr6
SEC61A2	55176	Sec61 alpha 2 subunit (S. cerevisiae)	3,11	chr10
SECISBP2	79048	SECIS binding protein 2	5,82	chr9
SECP43	54952	tRNA selenocysteine associated protein	2,70	chr1
SEH1L	81929	SEH1-like (S. cerevisiae)	2,41	chr18
SELI	85465	selenoprotein I	2,75	chr2
SEMA3F	6405	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (sema	8,60	chr3
SEMA4C	54910	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and sh	4,77	chr2
SEMA4D	10507	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and sh	4,61	chr9
SEMA5B	54437	sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmem	3,24	chr3
SEMA6A	57556	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaph	114,93	chr5
SENP2	59343	SUMO1/sentrin/SMT3 specific peptidase 2	2,33	chr3
SENP3	26168	SUMO1/sentrin/SMT3 specific peptidase 3	2,38	chr17
SENP6	26054	SUMO1/sentrin specific peptidase 6	3,15	chr6
SENP8	123228	SUMO/sentrin specific peptidase family member 8	2,52	chr15
SEPHS1	22929	Selenophosphate synthetase 1	27,72	chr2
SERBP1	26135	SERPINE1 mRNA binding protein 1	4,31	chr1
SERF1A	8293	small EDRK-rich factor 1A (telomeric)	3,05	chr5
SERF1A	56617 /// 8293	small EDRK-rich factor 1A (telomeric) /// small EDRK-rich factor 1B (centromeric	6,49	chr5
SERF2	10169 /// 25764	small EDRK-rich factor 2 /// Huntingtin interacting protein K	2,61	chr15
SERPINB6	5269	serpin peptidase inhibitor, clade B (ovalbumin), member 6	13,45	chr1
SERPINB9	5272	serpin peptidase inhibitor, clade B (ovalbumin), member 9	7,56	chr6
SERPINI1	5274	serpin peptidase inhibitor, clade I (neuroserpin), member 1	4,85	chr3
SET	6418	SET translocation (myeloid leukemia-associated)	4,73	chr1
SET	389168 /// 6418	SET translocation (myeloid leukemia-associated) /// similar to SET protein (Phos	4,83	chrX
SETDB1	9869	SET domain, bifurcated 1	2,45	chr1
SF1	7536	splicing factor 1	3,06	chr11
SF3A1	10291	splicing factor 3a, subunit 1, 120kDa	2,02	chr22
SF3A2	8175	splicing factor 3a, subunit 2, 66kDa	3,18	chr19
SF3A3	10946	splicing factor 3a, subunit 3, 60kDa	2,47	chr1
SF3B1	23451	splicing factor 3b, subunit 1, 155kDa	3,54	chr2
SF3B3	23450	splicing factor 3b, subunit 3, 130kDa	2,34	chr16
SFMBT1	51460	Scm-like with four mbt domains 1	5,51	chr3
SFMBT2	57713	Scm-like with four mbt domains 2	2,37	chr10
SFN	2810	stratifin	6,90	chr1
SFPQ	6421	Splicing factor proline/glutamine-rich (polypyrimidine tract binding protein associa	3,61	chr1
SFRP2	6423	secreted frizzled-related protein 2	113,98	chr4
SFRS1	6426	Splicing factor, arginine/serine-rich 1 (splicing factor 2, alternate splicing factor)	4,65	chr17
SFRS10	6434	splicing factor, arginine/serine-rich 10 (transformer 2 homolog, Drosophila)	3,15	chr3
SFRS12	140890	Splicing factor, arginine/serine-rich 12	2,11	chr5
SFRS15	57466	splicing factor, arginine/serine-rich 15	2,82	chr21
SFRS2	6427	splicing factor, arginine/serine-rich 2	3,19	chr17

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SFRS3	6428	splicing factor, arginine/serine-rich 3	3,82	chr6
SFRS4	6429	Splicing factor, arginine/serine-rich 4	2,19	chr1
SFRS5	6430	splicing factor, arginine/serine-rich 5	2,09	chr14
SFRS7	6432	splicing factor, arginine/serine-rich 7, 35kDa	6,09	chr2
SFT2D1	113402	SFT2 domain containing 1	2,23	chr6
SFXN2	118980	sideroflexin 2	3,66	chr10
SFXN5	94097	sideroflexin 5	2,09	chr2
SGEF	26084	Src homology 3 domain-containing guanine nucleotide exchange factor	6,00	chr3
SGNE1	6447	secretory granule, neuroendocrine protein 1 (7B2 protein)	2,70	chr15
SGOL2	151246	shugoshin-like 2 (S. pombe)	3,78	chr2
SGTA	6449	small glutamine-rich tetratricopeptide repeat (TPR)-containing, alpha	2,22	chr19
SH3GL2	6456	SH3-domain GRB2-like 2	4,09	chr9
SH3GL3	6457	SH3-domain GRB2-like 3	3,72	chr15
SHANK2	22941	SH3 and multiple ankyrin repeat domains 2	8,11	chr11
SHMT1	6470	serine hydroxymethyltransferase 1 (soluble)	3,69	chr17
SHPRH	257218	SNF2 histone linker PHD RING helicase	3,64	chr6
SIAH1	6477	seven in absentia homolog 1 (Drosophila)	2,52	chr16
SIAHBP1	22827	fuse-binding protein-interacting repressor	2,00	chr8
SIGIRR	59307	single immunoglobulin and toll-interleukin 1 receptor (TIR) domain	3,44	chr11
SIL	6491	TAL1 (SCL) interrupting locus	4,52	chr1
SILV	6490	silver homolog (mouse)	30,56	chr12
SIN3A	25942	SIN3 homolog A, transcription regulator (yeast)	3,51	chr15
SIP1	8487	survival of motor neuron protein interacting protein 1	2,35	chr14
SIPA1L2	57568	signal-induced proliferation-associated 1 like 2	3,70	chr1
SIRT1	23411	sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae)	6,15	chr10
SIRT5	23408	sirtuin (silent mating type information regulation 2 homolog) 5 (S. cerevisiae)	2,69	chr6
SITPEC	51295	signaling intermediate in Toll pathway, evolutionarily conserved	2,73	chr19
SIVA	10572	CD27-binding (Siva) protein	3,49	chr14
SKB1	10419	SKB1 homolog (S. pombe)	2,09	chr14
SKIL	6498	SKI-like	2,26	chr3
SKIV2L2	23517	superkiller viralicidic activity 2-like 2 (S. cerevisiae)	3,94	chr5
SKP2	6502	S-phase kinase-associated protein 2 (p45)	8,02	chr5
SLC11A2	4891	solute carrier family 11 (proton-coupled divalent metal ion transporters), member	4,97	chr12
SLC12A9	56996	solute carrier family 12 (potassium/chloride transporters), member 9	2,21	chr7
SLC15A4	121260	solute carrier family 15, member 4	2,21	chr12
SLC16A1	6566	solute carrier family 16 (monocarboxylic acid transporters), member 1	7,32	chr1
SLC16A10	117247	solute carrier family 16 (monocarboxylic acid transporters), member 10	20,68	chr6
SLC16A4	9122	Solute carrier family 16 (monocarboxylic acid transporters), member 4	6,68	chr1
SLC16A9	220963	solute carrier family 16 (monocarboxylic acid transporters), member 9	21,54	chr10
SLC19A1	6573	solute carrier family 19 (folate transporter), member 1	2,27	chr21
SLC19A2	10560	solute carrier family 19 (thiamine transporter), member 2	4,38	chr1
SLC1A2	6506	solute carrier family 1 (glial high affinity glutamate transporter), member 2	2,30	chr11
SLC1A6	6511	solute carrier family 1 (high affinity aspartate/glutamate transporter), member 6	30,29	chr19
SLC24A3	57419	solute carrier family 24 (sodium/potassium/calcium exchanger), member 3	2,69	chr20
SLC25A13	10165	solute carrier family 25, member 13 (citrin)	5,65	chr7
SLC25A15	10166	solute carrier family 25 (mitochondrial carrier; ornithine transporter) member 15	3,06	chr13
SLC25A19	60386	solute carrier family 25 (mitochondrial deoxynucleotide carrier), member 19	5,05	chr17
SLC25A21	89874	solute carrier family 25 (mitochondrial oxodicarboxylate carrier), member 21	3,13	chr14
SLC25A26	115286	solute carrier family 25, member 26	2,67	chr3
SLC25A29	123096	solute carrier family 25, member 29	3,93	chr14
SLC25A37	51312	solute carrier family 25, member 37	2,15	chr8
SLC25A4	291	solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), m	3,21	chr4
SLC25A5	292	solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), m	2,35	chr7
SLC26A6	65010	solute carrier family 26, member 6	2,77	chr3
SLC27A2	11001	solute carrier family 27 (fatty acid transporter), member 2	5,76	chr15
SLC27A3	11000	solute carrier family 27 (fatty acid transporter), member 3	10,12	chr1
SLC27A5	10998	solute carrier family 27 (fatty acid transporter), member 5	2,54	chr19
SLC29A1	2030	solute carrier family 29 (nucleoside transporters), member 1	7,02	chr6
SLC29A2	3177	solute carrier family 29 (nucleoside transporters), member 2	2,26	chr11
SLC29A3	55315	solute carrier family 29 (nucleoside transporters), member 3	2,37	chr10
SLC2A3	6515	solute carrier family 2 (facilitated glucose transporter), member 3	10,38	chr12
SLC2A3	144195 /// 6515	solute carrier family 2 (facilitated glucose transporter), member 3 /// solute carrie	7,96	chr12
SLC35B4	84912	solute carrier family 35, member B4	2,14	chr7
SLC35F1	222553	solute carrier family 35, member F1	9,40	chr6
SLC37A1	54020	solute carrier family 37 (glycerol-3-phosphate transporter), member 1	2,87	chr21
SLC37A4	2542	solute carrier family 37 (glycerol-6-phosphate transporter), member 4	2,39	chr11
SLC38A1	81539	Solute carrier family 38, member 1	2,97	chr12

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SLC38A5	92745	solute carrier family 38, member 5	**3,25**	chrX
SLC39A1	27173	solute carrier family 39 (zinc transporter), member 1	**3,20**	chr1
SLC39A10	57181	Solute carrier family 39 (zinc transporter), member 10	**5,79**	chr2
SLC39A8	64116	solute carrier family 39 (zinc transporter), member 8	**4,51**	chr4
SLC43A1	8501	solute carrier family 43, member 1	**2,71**	chr11
SLC43A3	29015	solute carrier family 43, member 3	**2,62**	chr11
SLC44A1	23446	solute carrier family 44, member 1	**6,79**	chr9
SLC45A4	57210	solute carrier family 45, member 4	**2,86**	chr8
SLC4A11	83959	solute carrier family 4, sodium bicarbonate transporter-like, member 11	**12,98**	chr20
SLC5A10	125206	Solute carrier family 5 (sodium/glucose cotransporter), member 10	**2,37**	chr17
SLC5A6	8884	solute carrier family 5 (sodium-dependent vitamin transporter), member 6	**10,17**	chr2
SLC6A6	6533	solute carrier family 6 (neurotransmitter transporter, taurine), member 6	**2,22**	chr3
SLC6A8	6535	solute carrier family 6 (neurotransmitter transporter, creatine), member 8	**5,42**	chrX
SLC6A8	386757 /// 6535	solute carrier family 6 (neurotransmitter transporter, creatine), member 8 /// simil	**3,89**	chr16
SLC7A3	84889	solute carrier family 7 (cationic amino acid transporter, y+ system), member 3	**215,51**	chrX
SLC7A8	23428	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 8	**22,38**	chr14
SLC9A3R1	9368	solute carrier family 9 (sodium/hydrogen exchanger), member 3 regulator 1	**3,15**	chr17
SLCO3A1	28232	solute carrier organic anion transporter family, member 3A1	**4,24**	chr15
SLCO4A1	28231	solute carrier organic anion transporter family, member 4A1	**3,58**	chr20
SLCO4C1	353189	solute carrier organic anion transporter family, member 4C1	**7,24**	chr5
SLD5	84296	SLD5 homolog /// SLD5 homolog	**4,37**	chr8
SLITRK5	26050	SLIT and NTRK-like family, member 5	**2,12**	chr13
SMA4	11039	SMA4	**4,70**	chr5
SMARCA3	6596	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, sub	**2,14**	chr3
SMARCA4	6597	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, sub	**4,67**	chr19
SMARCA5	8467	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, sub	**3,07**	chr4
SMARCAD1	56916	SWI/SNF-related, matrix-associated actin-dependent regulator of chromatin, sub	**2,20**	chr4
SMARCB1	6598	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, sub	**2,30**	chr22
SMARCC1	6599	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, sub	**7,65**	chr3
SMARCD2	6603	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, sub	**3,03**	chr17
SMARCE1	6605	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, sub	**2,85**	chr17
SMC1L1	8243	SMC1 structural maintenance of chromosomes 1-like 1 (yeast)	**2,25**	chrX
SMC2L1	10592	SMC2 structural maintenance of chromosomes 2-like 1 (yeast)	**5,26**	chr9
SMC4L1	10051	SMC4 structural maintenance of chromosomes 4-like 1 (yeast)	**2,41**	chr3
SMC6L1	79677	SMC6 structural maintenance of chromosomes 6-like 1 (yeast)	**2,45**	chr2
SMG1	40345 /// 440354	PI-3-kinase-related kinase SMG-1 /// KIAA0220-like protein /// hypothetical prote	**2,20**	chr16
SMN1	6606 /// 6607	survival of motor neuron 1, telomeric /// survival of motor neuron 2, centromeric	**2,51**	chr5
SMPDL3B	27293	sphingomyelin phosphodiesterase, acid-like 3B	**7,74**	chr1
SMU1	55234	Smu-1 suppressor of mec-8 and unc-52 homolog (C. elegans)	**2,44**	chr9
SMUG1	23583	Single-strand-selective monofunctional uracil-DNA glycosylase 1	**2,10**	chr12
SMYD4	114826	SET and MYND domain containing 4	**5,93**	chr17
SNCA	6622	synuclein, alpha (non A4 component of amyloid precursor) /// synuclein, alpha (n	**3,47**	chr4
SND1	27044	Staphylococcal nuclease domain containing 1 /// Staphylococcal nuclease doma	**2,58**	(vide)
SNN	8303	stannin	**5,18**	chr16
SNRPA1	6627	Small nuclear ribonucleoprotein polypeptide A'	**4,71**	chr15
SNRPB	6628	small nuclear ribonucleoprotein polypeptides B and B1	**2,07**	chr20
SNRPC	6631	small nuclear ribonucleoprotein polypeptide C	**2,44**	chr5
SNRPD1	6632	small nuclear ribonucleoprotein D1 polypeptide 16kDa	**3,87**	chr18
SNRPD2	6633	small nuclear ribonucleoprotein D2 polypeptide 16.5kDa	**2,00**	chr19
SNRPD3	6634	small nuclear ribonucleoprotein D3 polypeptide 18kDa	**3,83**	chr22
SNRPE	6635	small nuclear ribonucleoprotein polypeptide E	**2,46**	chr1
SNRPN	6638	Small nuclear ribonucleoprotein polypeptide N	**25,36**	chr15
SNRPN	6638 /// 8926	small nuclear ribonucleoprotein polypeptide N /// SNRPN upstream reading fram	**4,75**	chr15
SNX10	29887	sorting nexin 10	**9,38**	chr7
SNX5	27131	sorting nexin 5	**3,27**	chr20
SOCS1	8651	suppressor of cytokine signaling 1	**2,57**	chr16
SOCS2	8835	suppressor of cytokine signaling 2	**3,62**	chr12
SOCS7	30837	Suppressor of cytokine signaling 7	**2,92**	chr17
SORBS1	10580	sorbin and SH3 domain containing 1	**13,18**	chr10
SORD	6652	sorbitol dehydrogenase	**2,55**	chr15
SORL1	6653	sortilin-related receptor, L(DLR class) A repeats-containing	**39,53**	chr11
SOX11	6664	SRY (sex determining region Y)-box 11	**3,41**	chr2
SOX13	9580	SRY (sex determining region Y)-box 13	**2,12**	chr1
SOX15	6665	SRY (sex determining region Y)-box 15	**2,72**	chr17
SOX2	6657	SRY (sex determining region Y)-box 2	**240,38**	chr3
SOX3	6658	SRY (sex determining region Y)-box 3	**5,34**	chrX
SOX4	6659	SRY (sex determining region Y)-box 4	**4,26**	chr6

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SOX7	83595	SRY (sex determining region Y)-box 7	2,20	chr8
SOX8	30812	SRY (sex determining region Y)-box 8	4,23	chr16
SP1	6667	Sp1 transcription factor	2,33	chr12
SP3	6670	Sp3 transcription factor	2,93	chr2
SP4	6671	Sp4 transcription factor	7,37	chr7
SP8	221833	Sp8 transcription factor	3,32	chr7
SPAG5	10615	sperm associated antigen 5	8,31	chr17
SPAG7	9552	sperm associated antigen 7 /// sperm associated antigen 7	2,03	chr17
SPATA13	221178	spermatogenesis associated 13	3,38	chr13
SPATA2	9825	spermatogenesis associated 2	2,66	chr20
SPATA5L1	79029	spermatogenesis associated 5-like 1	2,23	chr15
SPATA6	54558	Spermatogenesis associated 6	3,58	chr1
SPBC24	147841	spindle pole body component 24 homolog (S. cerevisiae)	3,53	(vide)
SPBC25	57405	spindle pole body component 25 homolog (S. cerevisiae)	11,32	chr2
SPEN	23013	spen homolog, transcriptional regulator (Drosophila)	2,03	chr1
SPHK2	56848	sphingosine kinase 2	3,44	chr19
SPIB	6689	Spi-B transcription factor (Spi-1/PU.1 related) /// Spi-B transcription factor (Spi-1/	2,92	chr19
SPINT1	6692	serine peptidase inhibitor, Kunitz type 1	7,99	chr15
SPINT2	10653	serine peptidase inhibitor, Kunitz type, 2	21,93	chr19
SPON1	10418	spondin 1, extracellular matrix protein	2,51	chr11
SPP1	6696	secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte	5,65	chr4
SPRY1	10252	sprouty homolog 1, antagonist of FGF signaling (Drosophila)	10,38	chr4
SPRY4	81848	Sprouty homolog 4 (Drosophila)	2,48	chr11
SPSB2	84727	splA/ryanodine receptor domain and SOCS box containing 2	2,42	chr12
SPSB4	92369	splA/ryanodine receptor domain and SOCS box containing 4	3,46	chr3
SQLE	6713	squalene epoxidase	2,55	chr8
SR140	23350	U2-associated SR140 protein	6,93	chr3
SREBF1	6720	Sterol regulatory element binding transcription factor 1	2,48	chr17
SRPK1	6732	SFRS protein kinase 1	2,25	chr6
SRRM2	23524	serine/arginine repetitive matrix 2	3,63	chr16
SRY	6736	sex determining region Y	2,88	chrY
SS18L2	51188	synovial sarcoma translocation gene on chromosome 18-like 2	3,87	chr3
SSB	6741	Sjogren syndrome antigen B (autoantigen La)	4,23	chr2
SSBP1	6742	single-stranded DNA binding protein 1	2,73	chr7
SSBP2	23635	Single-stranded DNA binding protein 2	2,52	chr5
SSBP3	23648	single stranded DNA binding protein 3	3,10	chr7
SSRP1	6749	structure specific recognition protein 1	3,53	chr11
ST14	6768	suppression of tumorigenicity 14 (colon carcinoma, matriptase, epithin)	3,11	chr11
ST3GAL6	10402	ST3 beta-galactoside alpha-2,3-sialyltransferase 6	2,11	chr3
ST6GAL1	6480	ST6 beta-galactosamide alpha-2,6-sialyltranferase 1	12,34	chr3
ST6GALNAC3	256435	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminid	6,05	chr1
ST8SIA3	51046	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 3	2,13	chr18
STAG2	10735	stromal antigen 2	3,36	chrX
STAP2	55620	signal-transducing adaptor protein-2	2,29	chr19
STARD7	56910	START domain containing 7	2,65	chr2
STAT5B	6777	signal transducer and activator of transcription 5B	2,30	chr17
STC1	6781	Stanniocalcin 1	4,83	chr8
STIP1	10963	stress-induced-phosphoprotein 1 (Hsp70/Hsp90-organizing protein)	2,45	chr11
STK11IP	114790	serine/threonine kinase 11 interacting protein	2,03	chr2
STK24	8428	serine/threonine kinase 24 (STE20 homolog, yeast)	2,55	chr13
STK33	65975	serine/threonine kinase 33	2,79	chr11
STK35	140901	serine/threonine kinase 35	3,26	chr20
STK6	6790	serine/threonine kinase 6	6,21	chr20
STMN3	50861	stathmin-like 3	2,58	chr20
STN2	85439	stonin 2	6,44	chr14
STOML2	30968	stomatin (EPB72)-like 2	3,17	chr9
STOX2	56977	storkhead box 2	10,44	chr4
STRA13	201254	stimulated by retinoic acid 13 homolog (mouse)	2,68	chr17
STRBP	55342	Spermatid perinuclear RNA binding protein	33,04	chr9
STRN	6801	Striatin, calmodulin binding protein	3,33	chr2
STX3A	6809	syntaxin 3A	5,38	chr11
STX6	10228	syntaxin 6	2,64	chr1
SUB1	10923	SUB1 homolog (S. cerevisiae)	2,50	chr5
SUMO1	7341	SMT3 suppressor of mif two 3 homolog 1 (yeast)	2,13	chr1
SUMO2	6613	SMT3 suppressor of mif two 3 homolog 2 (yeast)	2,25	chr5
SUPT16H	11198	suppressor of Ty 16 homolog (S. cerevisiae)	4,09	chr12
SUPT3H	8464	suppressor of Ty 3 homolog (S. cerevisiae)	2,73	chr6

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SURF2	6835	surfeit 2	2,32	chr9
SURF5	6837	surfeit 5	5,46	chr9
SURF6	6838	surfeit 6	2,61	chr9
SUV39H1	6839	suppressor of variegation 3-9 homolog 1 (Drosophila)	2,36	chrX
SUV39H2	79723	suppressor of variegation 3-9 homolog 2 (Drosophila)	7,01	chr10
SUV420H1	51111	Suppressor of variegation 4-20 homolog 1 (Drosophila)	4,63	chr11
SUZ12	23512	suppressor of zeste 12 homolog (Drosophila)	2,72	chr17
SYMPK	8189	symplekin	3,56	chr19
SYN2	6854	synapsin II	2,09	chr3
SYNC1	81493	Syncoilin, intermediate filament 1	4,58	chr1
SYNCRIP	10492	synaptotagmin binding, cytoplasmic RNA interacting protein	2,44	chr20
SYNE2	23224	spectrin repeat containing, nuclear envelope 2	15,87	chr14
SYNGR3	9143	synaptogyrin 3	3,49	chr16
SYT1	6857	synaptotagmin I	5,88	chr12
SYT13	57586	synaptotagmin XIII	19,22	chr11
SYT17	51760	Synaptotagmin XVII	3,45	chr16
SYT4	6860	synaptotagmin IV	4,69	chr18
SYT6	148281	synaptotagmin VI	17,41	chr1
TAC1	6863	tachykinin, precursor 1 (substance K, substance P, neurokinin 1, neurokinin 2, n	2,80	chr7
TACC2	10579	transforming, acidic coiled-coil containing protein 2	2,65	chr10
TACC3	10460	transforming, acidic coiled-coil containing protein 3	11,97	chr4
TACSTD1	4072	tumor-associated calcium signal transducer 1	373,33	chr2
TACSTD2	4070	tumor-associated calcium signal transducer 2	2,30	chr1
TADA1L	117143	transcriptional adaptor 1 (HFI1 homolog, yeast)-like	3,14	chr1
TAF11	6882	TAF11 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 2	2,23	chr6
TAF15	8148	TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 6	3,92	chr17
TAF1A	9015	TATA box binding protein (TBP)-associated factor, RNA polymerase I, A, 48kDa	3,11	chr1
TAF1C	9013	TATA box binding protein (TBP)-associated factor, RNA polymerase I, C, 110kD	4,04	chr16
TAF4	6874	TAF4 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 13	4,19	chr20
TAF4B	6875	TAF4b RNA polymerase II, TATA box binding protein (TBP)-associated factor, 1	9,58	chr18
TAF5	6877	TAF5 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 10	6,35	chr10
TAF5L	27097	TAF5-like RNA polymerase II, p300/CBP-associated factor (PCAF)-associated fa	2,99	chr1
TAF9L	51616	TAF9-like RNA polymerase II, TATA box binding protein (TBP)-associated factor	2,35	chrX_random
TALDO1	6888	transaldolase 1	2,07	chr11
TAOK1	57551	TAO kinase 1	2,30	chr17
TARBP2	6895	TAR (HIV) RNA binding protein 2	2,88	chr12
TARDBP	23435	TAR DNA binding protein /// TAR DNA binding protein	2,33	chr1
TARS	6897	threonyl-tRNA synthetase	2,80	chr5
TARSL1	80222	threonyl-tRNA synthetase-like 1	2,68	chr1
TATDN1	83940	TatD DNase domain containing 1	2,05	chr10
TBC1D1	23216	TBC1 (tre-2/USP6, BUB2, cdc16) domain family, member 1	2,85	chr4
TBC1D14	57533	TBC1 domain family, member 14	2,27	chr4
TBC1D16	125058	TBC1 domain family, member 16	3,69	chr17
TBC1D4	9882	TBC1 domain family, member 4	2,03	chr13
TBC1D7	51256	TBC1 domain family, member 7	2,14	chr6
TBC1D8	11138	TBC1 domain family, member 8 (with GRAM domain)	5,48	chr2
TBCD	6904	tubulin-specific chaperone d /// tubulin-specific chaperone d	3,29	chr17
TBCE	6905	tubulin-specific chaperone e	2,10	chr1
TBL1Y	90665	Transducin (beta)-like 1Y-linked	9,51	chrY
TBL3	10607	transducin (beta)-like 3	2,52	chr16
TBP	6908	TATA box binding protein	2,40	chr6
TBPIP	29893	TBP-1 interacting protein	2,63	chr17
TBRG4	9238	transforming growth factor beta regulator 4	3,66	chr7
TCEA1	6917	transcription elongation factor A (SII), 1	2,51	chr3
TCEAL2	140597	transcription elongation factor A (SII)-like 2	31,45	chrX
TCERG1L	256536	transcription elongation regulator 1-like	2,45	chr10
TCF12	6938	Transcription factor 12 (HTF4, helix-loop-helix transcription factors 4)	2,38	chr15
TCF15	6939	transcription factor 15 (basic helix-loop-helix)	2,53	chr20
TCF20	6942	transcription factor 20 (AR1)	2,89	chr22
TCF3	6929	transcription factor 3 (E2A immunoglobulin enhancer binding factors E12/E47)	3,27	chr19
TCF7L1	83439	transcription factor 7-like 1 (T-cell specific, HMG-box) /// transcription factor 7-like	4,74	chr2
TCF7L2	6934	Transcription factor 7-like 2 (T-cell specific, HMG-box)	3,86	chr10
TCFL5	10732	Transcription factor-like 5 (basic helix-loop-helix)	4,08	chr20
TCOF1	6949	Treacher Collins-Franceschetti syndrome 1	6,25	chr5
TCP1	6950	t-complex 1	2,13	chr7
TDGF1	6997	teratocarcinoma-derived growth factor 1	648,52	chr3
TDP1	55775	tyrosyl-DNA phosphodiesterase 1	2,54	chr14

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TDRKH	11022	tudor and KH domain containing	4,46	chr1
TEAD2	8463	TEA domain family member 2	3,30	chr19
TEAD4	7004	TEA domain family member 4	4,21	chr12
TERF1	7013	telomeric repeat binding factor (NIMA-interacting) 1	42,46	chr8
TERF2	7014	telomeric repeat binding factor 2	2,22	chr16
TERT	7015	telomerase reverse transcriptase	2,08	chr5
TESK2	10420	testis-specific kinase 2	4,25	chr1
TEX10	54881	Testis expressed sequence 10	3,46	chr9
TEX15	56154	testis expressed sequence 15	5,03	chr8
TEX9	374618	testis expressed sequence 9	2,42	chr15
TFAM	7019	Transcription factor A, mitochondrial	5,25	chr10
TFAP2C	7022	transcription factor AP-2 gamma (activating enhancer binding protein 2 gamma)	3,67	chr20
TFB1M	51106	transcription factor B1, mitochondrial	2,87	chr6
TFCP2	7024	transcription factor CP2	2,71	chr12
TFDP2	7029	Transcription factor Dp-2 (E2F dimerization partner 2)	9,05	chr3
TGFBR1	7046	Transforming growth factor, beta receptor I (activin A receptor type II-like kinase,	2,40	chr9
TGFBR3	7049	transforming growth factor, beta receptor III (betaglycan, 300kDa)	2,04	chr1
TGIF	7050	TGFB-induced factor (TALE family homeobox)	4,53	chr18
TGIF2	60436	TGFB-induced factor 2 (TALE family homeobox)	5,27	chr20
THADA	63892	thyroid adenoma associated	2,39	chr2
THAP11	57215	THAP domain containing 11	4,09	chr16
THAP4	51078	THAP domain containing 4	2,29	chr2_random
THAP9	79725	THAP domain containing 9	12,16	chr4
THBS4	7060	thrombospondin 4	10,39	chr5
THEM2	55856	thioesterase superfamily member 2	3,46	chr6
THNSL1	79896	threonine synthase-like 1 (bacterial)	4,16	chr10
THOC1	9984	THO complex 1	2,82	chr18
THOC2	57187	THO complex 2	2,11	chrX
THOC3	84321	THO complex 3	3,33	chr5
THOC4	10189	THO complex 4	2,90	chr17_random
THRAP1	9969	Thyroid hormone receptor associated protein 1	2,96	chr17
THRAP2	23389	Thyroid hormone receptor associated protein 2	2,94	chr12
THRAP3	9967	thyroid hormone receptor associated protein 3	2,17	chr1
THRAP6	90390	thyroid hormone receptor associated protein 6	4,11	chr8
THRB	7068	thyroid hormone receptor, beta (erythroblastic leukemia viral (v-erb-a) oncogene	4,24	chr3
THUMPD2	80745	THUMP domain containing 2	2,30	chr2
THUMPD3	25917	THUMP domain containing 3	2,97	chr3
THY28	29087	thymocyte protein thy28	6,98	chr11
TIA1	7072	TIA1 cytotoxic granule-associated RNA binding protein	2,51	chr2
TIAM1	7074	T-cell lymphoma invasion and metastasis 1	2,46	chr21
TIAM2	26230	T-cell lymphoma invasion and metastasis 2	3,03	chr6
TIGA1	114915	TIGA1	2,55	chr5
TIGD7	91151	tigger transposable element derived 7 /// tigger transposable element derived 7	3,07	chr16
TIMELESS	8914	timeless homolog (Drosophila)	12,87	chr12
TIMM10	26519	translocase of inner mitochondrial membrane 10 homolog (yeast)	2,77	chr11
TIMM13	26517	translocase of inner mitochondrial membrane 13 homolog (yeast)	3,79	chr19
TIMM22	29928	translocase of inner mitochondrial membrane 22 homolog (yeast)	2,43	chr17
TIMM44	10469	translocase of inner mitochondrial membrane 44 homolog (yeast)	2,57	chr19
TIMM50	92609	translocase of inner mitochondrial membrane 50 homolog (yeast)	2,77	chr19
TIMM8A	1678	translocase of inner mitochondrial membrane 8 homolog A (yeast)	3,45	chr2
TIMM8B	26521	translocase of inner mitochondrial membrane 8 homolog B (yeast)	2,06	chr11
TIMP4	7079	TIMP metallopeptidase inhibitor 4	2,93	chr3
TJP2	9414	tight junction protein 2 (zona occludens 2)	5,26	chr9
TJP3	27134	tight junction protein 3 (zona occludens 3)	4,91	chr19
TKT	7086	transketolase (Wernicke-Korsakoff syndrome)	6,38	chr3
TLE1	7088	transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)	6,48	chr9
TLE1	389863 /// 7088	transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila) /// hypothetical g	2,37	chrX
TLE2	7089	transducin-like enhancer of split 2 (E(sp1) homolog, Drosophila)	3,89	chr19
TLE3	7090	transducin-like enhancer of split 3 (E(sp1) homolog, Drosophila)	2,32	chr15
TLK1	9874	tousled-like kinase 1	2,14	chr2
TM7SF2	7108	transmembrane 7 superfamily member 2	7,70	chr11
TMCC1	23023	transmembrane and coiled-coil domain family 1	2,61	chr3
TMEFF1	8577	transmembrane protein with EGF-like and two follistatin-like domains 1	6,99	chr9
TMEM11	8834	transmembrane protein 11	2,20	chr17
TMEM118	84900	Transmembrane protein 118	5,24	chr12
TMEM28	27112	transmembrane protein 28	2,49	chrX
TMEM30B	161291	transmembrane protein 30B	8,60	chr14

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TMEM33	55161	Transmembrane protein 33	3,05	chr4
TMEM37	140738	transmembrane protein 37	4,91	chr2
TMEM4	10330	transmembrane protein 4	2,75	chr12
TMEM48	55706	transmembrane protein 48	6,28	chr1
TMEM53	79639	transmembrane protein 53	2,80	chr1
TMEM63A	9725	transmembrane protein 63A	2,11	chr1
TMEM64	169200	transmembrane protein 64	2,39	chr8
TMEM68	137695	transmembrane protein 68	3,70	chr8
TMEM70	54968	transmembrane protein 70	2,20	chr8
TMPO	7112	Thymopoietin	4,75	chr12
TMPRSS2	7113	transmembrane protease, serine 2	4,23	chr21
TMSL8	11013	thymosin-like 8	6,34	chrX
TNFSF11	8600	tumor necrosis factor (ligand) superfamily, member 11	5,07	chr13
TNNI3	7137	troponin I type 3 (cardiac)	5,38	chr19
TNNT1	7138	troponin T type 1 (skeletal, slow)	9,44	chr19
TNPO3	23534	transportin 3	3,24	chr7
TNRC6A	27327	trinucleotide repeat containing 6A	4,04	chr16
TNRC6B	23112	Trinucleotide repeat containing 6B	2,91	chr22
TNRC6C	57690	trinucleotide repeat containing 6C	2,44	chr17
TNRC9	27324	trinucleotide repeat containing 9	58,38	chr16
TOE1	114034	target of EGR1, member 1 (nuclear)	3,83	chr1
TOM1L1	10040	target of myb1-like 1 (chicken)	2,90	chr17
TOMM22	56993	translocase of outer mitochondrial membrane 22 homolog (yeast)	2,36	chr22
TOMM40	10452	translocase of outer mitochondrial membrane 40 homolog (yeast)	2,43	chr14
TOMM40L	84134	translocase of outer mitochondrial membrane 40 homolog-like (yeast)	2,05	chr1
TOP1MT	116447	topoisomerase (DNA) I, mitochondrial	5,91	chr8
TOP2A	7153	topoisomerase (DNA) II alpha 170kDa	4,98	chr17
TOP3A	7156	topoisomerase (DNA) III alpha	2,43	chr17
TOPBP1	11073	topoisomerase (DNA) II binding protein 1	2,02	chr3
TOPORS	10210	topoisomerase I binding, arginine/serine-rich	2,13	chr9
TOR3A	64222	torsin family 3, member A	2,97	chr1
TOX	9760	Full-length cDNA clone CS0DM012YE14 of Fetal liver of Homo sapiens (human)	2,05	chr8
TP53RK	112858	TP53 regulating kinase	2,31	chr20
TPD52	7163	tumor protein D52	34,89	chr8
TPK1	27010	thiamin pyrophosphokinase 1	2,05	chr7
TPP2	7174	tripeptidyl peptidase II	2,82	chr13
TPR	7175	translocated promoter region (to activated MET oncogene)	3,12	chr1
TPRT	23590	trans-prenyltransferase	2,67	chr10
TPST2	8459	tyrosylprotein sulfotransferase 2	3,67	chr22
TPX2	22974	TPX2, microtubule-associated, homolog (Xenopus laevis)	6,28	chr20
TRA16	126382	TR4 orphan receptor associated protein TRA16	3,03	chr19
TRA2A	29896	Transformer-2 alpha	2,33	chr7
TRAF2	7186	TNF receptor-associated factor 2	2,37	chr9
TRAF4	9618	TNF receptor-associated factor 4	3,00	chr17
TRAP1	10131	TNF receptor-associated protein 1	3,01	chr16
TRAPPC6A	79090	trafficking protein particle complex 6A	3,18	chr19
TREX1	11277	three prime repair exonuclease 1	4,60	chr3
TREX2	11219 /// 55559	three prime repair exonuclease 2 /// 26S proteasome-associated UCH interacting	2,02	chrX
TRFP	9477	Trf (TATA binding protein-related factor)-proximal homolog (Drosophila)	2,69	chr6
TRIB1	10221	tribbles homolog 1 (Drosophila)	4,16	chr8
TRIB2	28951	tribbles homolog 2 (Drosophila)	3,03	chr2
TRIM14	9830	tripartite motif-containing 14	3,11	chr9
TRIM2	23321	tripartite motif-containing 2	2,32	chr4
TRIM24	8805	tripartite motif-containing 24	5,73	chr7
TRIM28	10155	tripartite motif-containing 28	2,52	chr19
TRIM33	51592	tripartite motif-containing 33	3,57	chr1
TRIM36	55521	tripartite motif-containing 36	7,96	chr5
TRIM37	4591	tripartite motif-containing 37	3,21	chr17
TRIM39	56658	tripartite motif-containing 39	2,00	chr6
TRIM45	80263	Tripartite motif-containing 45	5,32	chr1
TRIM59	286827	tripartite motif-containing 59	4,13	chr3
TRIM6	117854	tripartite motif-containing 6	5,51	chr11
TRIP	10293	TRAF interacting protein	2,23	chr3
TRIP10	9322	thyroid hormone receptor interactor 10	2,40	chr19
TRIP12	9320	Thyroid hormone receptor interactor 12	3,99	(vide)
TRIP13	9319	thyroid hormone receptor interactor 13	4,64	chr5
TRIT1	54802	tRNA isopentenyltransferase 1	2,91	chr1

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TRMT1	55621	TRM1 tRNA methyltransferase 1 homolog (S. cerevisiae)	3,18	chr19
TRMT12	55039	tRNA methyltranferase 12 homolog (S. cerevisiae)	2,40	chr8
TRMT5	57570	TRM5 tRNA methyltransferase 5 homolog (S. cerevisiae)	2,44	chr14
TRUB2	26995	TruB pseudouridine (psi) synthase homolog 2 (E. coli)	2,45	chr9
TSC22D1	8848	TSC22 domain family, member 1	2,88	chr13
TSEN2	80746	tRNA splicing endonuclease 2 homolog (SEN2, S. cerevisiae)	2,69	chr3
TSEN54	283989	tRNA splicing endonuclease 54 homolog (SEN54, S. cerevisiae)	4,46	chr17
TSGA10	80705	Testis specific, 10	3,53	chr2
TSN	7247	translin	2,33	chr2
TSPAN12	23554	tetraspanin 12	3,63	chr7
TSPAN18	90139	tetraspanin 18	2,29	chr11
TSPAN2	10100	tetraspanin 2	7,19	chr1
TSPAN33	340348	tetraspanin 33	3,98	chr7
TSPAN6	7105	tetraspanin 6	2,31	chrX
TTC19	54902	Tetratricopeptide repeat domain 19	5,51	chr17
TTC9	23508	tetratricopeptide repeat domain 9	4,33	chr14
TTF1	7270	transcription termination factor, RNA polymerase I	3,18	chr9
TTF2	8458	transcription termination factor, RNA polymerase II	3,11	chr1
TTK	7272	TTK protein kinase	14,89	chr6
TTLL4	9654	tubulin tyrosine ligase-like family, member 4	2,91	chr2
TUBA1	7277	tubulin, alpha 1 (testis specific)	2,51	chr2
TUBB2	347733 /// 7280	tubulin, beta 2 /// tubulin, beta polypeptide paralog	3,72	chr6
TUBB3	10381	tubulin, beta 3	2,02	chr16
TUBB-PARAL	347733	tubulin, beta polypeptide paralog	5,07	chr6
TUBD1	51174	tubulin, delta 1	4,26	chr17
TUBG1	7283	tubulin, gamma 1	2,58	chr7
TUBGCP3	10426	tubulin, gamma complex associated protein 3	2,12	chr13
TUFM	7284	Tu translation elongation factor, mitochondrial	2,78	chr16
TXNDC	81542	thioredoxin domain containing /// thioredoxin domain containing	3,19	chr14
TXNL2	10539	thioredoxin-like 2	2,39	chr6
TYMS	7298	thymidylate synthetase	2,78	chr18
TYRO3	7301	TYRO3 protein tyrosine kinase	5,79	chr15
U1SNRNPBP	11066	U11/U12 snRNP 35K	2,87	chr12
U2AF1	7307	U2(RNU2) small nuclear RNA auxiliary factor 1	3,61	chr15
U2AF2	11338	U2 (RNU2) small nuclear RNA auxiliary factor 2	4,34	chr19
UBA2	10054	SUMO-1 activating enzyme subunit 2	2,40	chr19
UBADC1	10422	ubiquitin associated domain containing 1	2,70	chr9
UBAP2	55833	ubiquitin associated protein 2	2,88	chr9
UBE2C	11065	ubiquitin-conjugating enzyme E2C	10,33	chr20
UBE2D2	7322	Ubiquitin-conjugating enzyme E2D 2 (UBC4/5 homolog, yeast)	2,60	chr5
UBE2E2	7325	Ubiquitin-conjugating enzyme E2E 2 (UBC4/5 homolog, yeast)	2,09	chr3
UBE2G1	7326	ubiquitin-conjugating enzyme E2G 1 (UBC7 homolog, yeast)	3,08	chr17
UBE2I	7329	Ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast)	2,80	chr16
UBE2L6	9246	ubiquitin-conjugating enzyme E2L 6	3,28	chr11
UBE2N	7334	ubiquitin-conjugating enzyme E2N (UBC13 homolog, yeast)	2,01	chr12
UBE2S	27338	ubiquitin-conjugating enzyme E2S	4,83	chr17
UBE2T	29089	ubiquitin-conjugating enzyme E2T (putative)	6,45	chr1
UBE3B	89910	ubiquitin protein ligase E3B	2,10	chr12
UBE3C	9690	Ubiquitin protein ligase E3C	3,73	chr7
UBE4B	10277	ubiquitination factor E4B (UFD2 homolog, yeast)	3,97	chr1
UBTF	7343	upstream binding transcription factor, RNA polymerase I	2,04	chr17
UCK1	83549	uridine-cytidine kinase 1	2,11	chr9
UCK2	7371	uridine-cytidine kinase 2	2,10	chr1
UCKL1	54963	uridine-cytidine kinase 1-like 1	3,58	chr20
UGCGL2	55757	UDP-glucose ceramide glucosyltransferase-like 2	2,24	chr13
UGP2	7360	UDP-glucose pyrophosphorylase 2	3,37	chr2
UGT8	7368	UDP glycosyltransferase 8 (UDP-galactose ceramide galactosyltransferase)	19,31	chr4
UIP1	55559	26S proteasome-associated UCH interacting protein 1	3,20	chrX
UMPS	7372	uridine monophosphate synthetase (orotate phosphoribosyl transferase and oro	3,38	chr3
UNC13B	10497	unc-13 homolog B (C. elegans)	3,48	chr9
UNC5D	137970	Unc-5 homolog D (C. elegans)	31,19	chr8
UNG	7374	uracil-DNA glycosylase	13,88	chr12
UNQ501	374882	MBC3205	3,68	chr19
UPF3B	65109	UPF3 regulator of nonsense transcripts homolog B (yeast)	4,20	chrX
UPP1	7378	uridine phosphorylase 1	4,10	chr7
UQCR	10975	ubiquinol-cytochrome c reductase, 6.4kDa subunit	2,70	chr19
UQCRFS1	7386	ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1	2,00	chr22

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UQCRH	7388	ubiquinol-cytochrome c reductase hinge protein	2,64	chr1
USP1	7398	ubiquitin specific peptidase 1	3,68	chr1
USP10	9100	ubiquitin specific peptidase 10	2,45	chr14
USP13	8975	Ubiquitin specific peptidase 13 (isopeptidase T-3)	3,14	chr5
USP25	29761	ubiquitin specific peptidase 25	3,14	chr21
USP28	57646	ubiquitin specific peptidase 28	8,39	chr11
USP31	57478	ubiquitin specific peptidase 31	5,43	chr16
USP32	84669	ubiquitin specific peptidase 32	2,30	chr17
USP34	9736	Ubiquitin specific peptidase 34	2,22	chr2
USP37	57695	ubiquitin specific peptidase 37	3,68	chr2
USP39	10713	ubiquitin specific peptidase 39	2,33	chr2
USP44	84101	ubiquitin specific peptidase 44	50,78	chr12
USP45	85015	Ubiquitin specific peptidase 45	2,02	chr6
USP46	64854	ubiquitin specific peptidase 46	2,54	chr4
USP51	158880	ubiquitin specific peptidase 51	4,06	chrX
USP52	9924	ubiquitin specific peptidase 52	2,70	chr12
USP54	159195	ubiquitin specific peptidase 54	6,98	chr10
USP6NL	9712	USP6 N-terminal like	2,33	chr10
USP7	7874	Unknown protein	2,94	chr16
USP9X	8239	ubiquitin specific peptidase 9, X-linked (fat facets-like, Drosophila)	3,60	chrX
UST	10090	uronyl-2-sulfotransferase	3,03	chr6
UTX	7403	ubiquitously transcribed tetratricopeptide repeat, X chromosome	2,99	chrX
UXS1	80146	UDP-glucuronate decarboxylase 1	2,12	chr2
VAMP8	8673	vesicle-associated membrane protein 8 (endobrevin)	15,21	chr2
VANGL2	57216	vang-like 2 (van gogh, Drosophila)	8,83	chr1
VARSL	57176	valyl-tRNA synthetase like	2,55	chr6
VAV3	10451	vav 3 oncogene	8,21	chr1
VDP	8615	Vesicle docking protein p115	2,61	chr4
VIL2	7430	villin 2 (ezrin)	6,34	chr6
VprBP	9730	Vpr-binding protein	2,21	chr3
VPS4A	27183	Vacuolar protein sorting 4A (yeast)	2,32	chr16
VRK1	7443	vaccinia related kinase 1	9,09	chr14
VRK2	7444	vaccinia related kinase 2	2,01	chr2
VSNL1	7447	visinin-like 1	17,97	chr2
WASL	8976	Wiskott-Aldrich syndrome-like	3,39	chr7
WBSCR16	81554	Williams-Beuren syndrome chromosome region 16 /// Williams-Beuren syndrom	2,06	chr7
WBSCR17	64409	Williams-Beuren syndrome chromosome region 17	6,65	chr7
WBSCR20C	260294	Williams Beuren syndrome chromosome region 20C	4,69	chr7
WDHD1	11169	WD repeat and HMG-box DNA binding protein 1	10,80	chr14
WDR12	55759	WD repeat domain 12	4,46	chr2
WDR18	57418	WD repeat domain 18	3,47	chr19
WDR23	80344	WD repeat domain 23	2,99	chr14
WDR27	253769	CDNA FLJ46815 fis, clone TRACH3036897 /// WD repeat domain 27	2,95	chr6
WDR3	10885	WD repeat domain 3	2,13	chr1
WDR33	55339	WD repeat domain 33	3,29	chr2
WDR34	89891	WD repeat domain 34	2,77	chr9
WDR35	57539	WD repeat domain 35	3,92	chr2
WDR40B	139170	WD repeat domain 40B	3,67	chrX
WDR42A	50717	WD repeat domain 42A	5,14	chr1
WDR43	23160	WD repeat domain 43	2,25	chr2
WDR46	9277	WD repeat domain 46	2,28	chr6
WDR48	57599	WD repeat domain 48	2,32	chr3
WDR5	11091	WD repeat domain 5	2,88	chr9
WDR50	51096	WD repeat domain 50	3,12	chr18
WDR51A	25886	WD repeat domain 51A	6,29	chr3
WDR54	84058	WD repeat domain 54	4,21	chr2
WDR57	9410	WD repeat domain 57 (U5 snRNP specific)	3,25	chr1
WDR58	79228	WD repeat domain 58	2,71	chr16
WDR59	79726	WD repeat domain 59	3,14	chr16
WDR6	11180	WD repeat domain 6	2,10	chr3
WDR67	93594	WD repeat domain 67	3,94	chr8
WDR70	55100	WD repeat domain 70	2,45	chr5
WDR72	256764	WD repeat domain 72	9,40	chr15
WDR74	54663	WD repeat domain 74 /// WD repeat domain 74	4,27	chr11
WDR75	84128	WD repeat domain 75	3,33	chr2
WDR76	79968	WD repeat domain 76	2,15	chr15
WDR77	79084	WD repeat domain 77	3,33	chr1

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WDR79	55135	WD repeat domain 79	**4,97**	chr17
WDSUB1	151525	WD repeat, SAM and U-box domain containing 1	**2,10**	chr2
WEE1	7465	WEE1 homolog (S. pombe)	**2,37**	chr11
WFDC2	10406	WAP four-disulfide core domain 2	**4,23**	chr20
WHSC1	7468	Wolf-Hirschhorn syndrome candidate 1	**2,16**	chr4
WHSC1L1	54904	Wolf-Hirschhorn syndrome candidate 1-like 1	**2,17**	chr8
WHSC2	7469	Wolf-Hirschhorn syndrome candidate 2	**2,29**	chr4
WIBG	84305	within bgcn homolog (Drosophila) /// within bgcn homolog (Drosophila)	**3,52**	chr12
WIF1	11197	WNT inhibitory factor 1	**17,67**	chr12
WNK3	65267	WNK lysine deficient protein kinase 3	**13,44**	chrX
WRNIP1	56897	Werner helicase interacting protein 1	**2,07**	chr6
WTAP	9589	Wilms tumor 1 associated protein	**3,56**	chr6
WWP1	11059	WW domain containing E3 ubiquitin protein ligase 1	**2,16**	chr3
XKR4	114786	X Kell blood group precursor-related family, member 4	**2,36**	chr8
XPO4	64328	exportin 4	**2,28**	chr13
XPO5	57510	exportin 5	**3,38**	chr6
XPO7	23039	exportin 7	**2,18**	chr8
XPR1	9213	Xenotropic and polytropic retrovirus receptor	**2,62**	chr1
XRCC1	7515	X-ray repair complementing defective repair in Chinese hamster cells 1	**3,36**	chr19
XRCC2	7516	X-ray repair complementing defective repair in Chinese hamster cells 2	**2,25**	chr7
XRCC5	7520	X-ray repair complementing defective repair in Chinese hamster cells 5 (double-	**3,18**	chr2
XRCC6	2547	X-ray repair complementing defective repair in Chinese hamster cells 6 (Ku auto	**2,23**	chr22
XRN2	22803	5'-3' exoribonuclease 2	**2,82**	chr20
XTP3TPA	79077	XTP3-transactivated protein A	**3,37**	chr16
YARS	8565	tyrosyl-tRNA synthetase	**3,24**	chr1
YBX1	4904	Y box binding protein 1	**2,97**	chr1
YEATS4	8089	YEATS domain containing 4	**4,67**	chr12
YME1L1	10730	YME1-like 1 (S. cerevisiae)	**3,17**	chr10
YPEL1	29799	yippee-like 1 (Drosophila)	**2,30**	chr22
YT521	91746	splicing factor YT521-B	**2,89**	chr4
YTHDC2	64848	YTH domain containing 2	**2,71**	chr5
YTHDF2	51441	YTH domain family, member 2	**2,47**	chr1
YWHAE	7531	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, eps	**3,15**	chr7
YY1	7528	YY1 transcription factor	**2,03**	chr14
ZA20D3	54469	Zinc finger, A20 domain containing 3	**4,01**	chr15
ZADH1	145482	zinc binding alcohol dehydrogenase, domain containing 1	**2,99**	chr14
ZBED1	9189	zinc finger, BED-type containing 1	**2,29**	chrY
ZBTB24	9841	zinc finger and BTB domain containing 24	**4,28**	chr6
ZBTB3	79842	zinc finger and BTB domain containing 3	**5,64**	chr11
ZBTB8OS	339487	zinc finger and BTB domain containing 8 opposite strand	**2,52**	chr1
ZBTB9	221504	zinc finger and BTB domain containing 9	**3,10**	chr6
ZC3H10	84872	zinc finger CCCH-type containing 10	**2,74**	chr12
ZC3HAV1	56829	zinc finger CCCH-type, antiviral 1	**3,05**	chr7
ZC3HC1	51530	zinc finger, C3HC-type containing 1	**2,40**	chr7
ZCCHC10	54819	zinc finger, CCHC domain containing 10	**2,09**	chr5
ZCCHC11	23318	Zinc finger, CCHC domain containing 11	**2,69**	chr1
ZCCHC14	23174	zinc finger, CCHC domain containing 14	**2,06**	chr16
ZCCHC3	85364	zinc finger, CCHC domain containing 3	**2,58**	chr20
ZCCHC7	84186	Zinc finger, CCHC domain containing 7	**3,72**	chr9
ZD52F10	93099	dermokine	**28,48**	chr19
ZDHHC11	79844	zinc finger, DHHC-type containing 11	**5,57**	chr5
ZDHHC15	158866	zinc finger, DHHC-type containing 15	**3,54**	chrX
ZDHHC22	283576	zinc finger, DHHC-type containing 22	**2,85**	chr14
ZDHHC23	254887	zinc finger, DHHC-type containing 23	**10,00**	chr3
ZF	58487	HCF-binding transcription factor Zhangfei	**2,01**	chr11
ZFAND3	60685	Zinc finger, AN1-type domain 3	**2,19**	chr6
ZFP161	7541	zinc finger protein 161 homolog (mouse)	**2,07**	chr18
ZFP36L2	678	zinc finger protein 36, C3H type-like 2	**2,90**	chr2
ZFP42	132625	zinc finger protein 42	**107,59**	chr4
ZFP62	92379	zinc finger protein 62 homolog (mouse)	**3,93**	chr5_random
ZFPL	162967	zinc finger protein like	**3,52**	chr19
ZGPAT	84619	zinc finger, CCCH-type with G patch domain	**2,35**	chr20
ZIC2	7546	Zic family member 2 (odd-paired homolog, Drosophila)	**65,62**	chr13
ZIC3	7547	Zic family member 3 heterotaxy 1 (odd-paired homolog, Drosophila)	**68,18**	chrX
ZIK1	284307	zinc finger protein interacting with K protein 1	**9,74**	chr19
ZMAT4	79698	zinc finger, matrin type 4	**4,76**	chr8
ZMYM1	79830	zinc finger, MYM-type 1	**2,37**	chr1

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ZMYND19	116225	zinc finger, MYND-type containing 19	**3,47**	chr9
ZNF10	7556	zinc finger protein 10	**3,69**	chr12
ZNF101	94039	zinc finger protein 101	**3,86**	chr19
ZNF114	163071	zinc finger protein 114	**6,82**	chr19
ZNF11B	7558	zinc finger protein 11B	**3,51**	chr10
ZNF124	7678	zinc finger protein 124 (HZF-16)	**5,80**	chr1
ZNF131	7690	Zinc finger protein 131 (clone pHZ-10)	**3,80**	chr5
ZNF134	7693	zinc finger protein 134 (clone pHZ-15)	**3,58**	chr19
ZNF137	7696	zinc finger protein 137 (clone pHZ-30)	**3,44**	chr19
ZNF138	7697	zinc finger protein 138	**12,07**	chr7
ZNF14	7561	zinc finger protein 14 (KOX 6)	**2,80**	chr19
ZNF140	7699	Zinc finger protein 140 (clone pHZ-39)	**2,32**	chr12
ZNF141	7700	Zinc finger protein 141 (clone pHZ-44)	**2,58**	chr4
ZNF142	7701	zinc finger protein 142 (clone pHZ-49)	**2,18**	chr2
ZNF143	7702	zinc finger protein 143 (clone pHZ-1)	**3,04**	chr11
ZNF165	7718	zinc finger protein 165	**12,07**	chr6
ZNF167	55888	zinc finger protein 167	**2,52**	chr3
ZNF180	7733	zinc finger protein 180 (HHZ168)	**3,07**	chr19
ZNF195	7748	zinc finger protein 195	**5,65**	chr11
ZNF198	7750	Zinc finger protein 198	**8,00**	chr13
ZNF20	7568	zinc finger protein 20 (KOX 13)	**3,14**	chr19
ZNF200	7752	zinc finger protein 200	**2,09**	chr16
ZNF202	7753	zinc finger protein 202	**4,95**	chr11
ZNF204	7754	zinc finger protein 204	**13,28**	chr6
ZNF206	84891	zinc finger protein 206	**12,42**	chr16
ZNF207	7756	zinc finger protein 207	**2,96**	chr17
ZNF21	7569	zinc finger protein 21 (KOX 14)	**2,01**	chrX
ZNF215	7762	zinc finger protein 215	**2,32**	chr11
ZNF217	7764	zinc finger protein 217	**2,15**	chr20
ZNF219	51222	zinc finger protein 219	**3,06**	chr14
ZNF22	7570	zinc finger protein 22 (KOX 15)	**2,79**	chr10
ZNF226	7769	zinc finger protein 226	**2,26**	chr19
ZNF227	7770	zinc finger protein 227	**3,47**	chr19
ZNF232	7775	zinc finger protein 232	**6,79**	chr17
ZNF239	8187	zinc finger protein 239	**3,74**	chr10
ZNF253	114977 /// 56242	zinc finger protein 253 /// hypothetical protein BC014148	**5,46**	chr19
ZNF256	10172	zinc finger protein 256	**7,30**	chr19
ZNF26	7574	zinc finger protein 26 (KOX 20)	**2,45**	chr12
ZNF261	9203	zinc finger protein 261	**3,17**	chrX
ZNF262	9202	zinc finger protein 262	**2,03**	chr1
ZNF267	10308	zinc finger protein 267	**2,28**	chr16
ZNF273	10793	zinc finger protein 273	**9,27**	chr7
ZNF278	23598	zinc finger protein 278	**5,75**	chr22
ZNF281	23528	zinc finger protein 281	**2,83**	chr1
ZNF285	26974	zinc finger protein 285	**2,46**	chr2
ZNF286	57335	zinc finger protein 286	**4,17**	chr17
ZNF292	23036	zinc finger protein 292	**2,54**	chr6
ZNF3	7551	zinc finger protein 3 (A8-51)	**2,18**	chr7
ZNF30	90075	zinc finger protein 30 (KOX 28)	**3,02**	chr19
ZNF300	91975	zinc finger protein 300	**5,54**	chr5
ZNF302	55900	zinc finger protein 302	**2,77**	chr19
ZNF311	282890	zinc finger protein 311	**2,77**	chr6
ZNF313	55905	zinc finger protein 313	**2,77**	chr20
ZNF323	64288	zinc finger protein 323	**2,19**	chr6
ZNF326	284695	zinc finger protein 326	**3,59**	chr1
ZNF331	55422	zinc finger protein 331	**11,91**	chr19
ZNF33A	7581	zinc finger protein 33A	**3,75**	chr10
ZNF342	162979	zinc finger protein 342	**2,28**	chr19
ZNF35	7584	zinc finger protein 35 (clone HF.10)	**2,57**	chr3
ZNF367	195828	zinc finger protein 367	**4,92**	chr9
ZNF38	7589	zinc finger protein 38	**4,30**	chr7
ZNF394	84124	zinc finger protein 394	**2,54**	chr7
ZNF395	55893	zinc finger protein 395	**2,17**	chr8
ZNF397	84307	zinc finger protein 397	**6,58**	chr18
ZNF398	57541	zinc finger protein 398	**9,43**	chr7
ZNF415	55786	zinc finger protein 415	**3,06**	chr19
ZNF416	55659	zinc finger protein 416	**2,05**	chr19

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ZNF418	147686	zinc finger protein 418	**4,65**	(vide)
ZNF420	147923	zinc finger protein 420	**2,45**	chr19
ZNF423	23090	zinc finger protein 423	**9,65**	chr16
ZNF43	7594	zinc finger protein 43 (HTF6)	**4,61**	chr19
ZNF430	80264	zinc finger protein 430	**2,45**	chr19
ZNF435	80345	zinc finger protein 435	**4,22**	chr6
ZNF44	51710	Zinc finger protein 44 (KOX 7)	**2,11**	chr19
ZNF443	10224	zinc finger protein 443	**3,93**	chr19
ZNF447	65982	zinc finger protein 447	**2,54**	chr19
ZNF462	58499	zinc finger protein 462	**7,48**	chr9
ZNF483	158399	zinc finger protein 483	**2,10**	chr9
ZNF488	118738	zinc finger protein 488	**2,05**	chr10
ZNF493	284443	zinc finger protein 493	**2,41**	chr19
ZNF496	84838	zinc finger protein 496	**3,03**	chr1
ZNF505	81931	zinc finger protein 505 /// zinc finger protein 505	**16,37**	chr19
ZNF507	22847	zinc finger protein 507	**2,64**	chr19
ZNF511	118472	zinc finger protein 511	**3,81**	chr10
ZNF518	9849	Zinc finger protein 518	**6,44**	(vide)
ZNF519	162655	zinc finger protein 519	**8,99**	chr18
ZNF529	57711	zinc finger protein 529	**2,22**	chr19
ZNF532	55205	zinc finger protein 532	**2,61**	chr18
ZNF544	27300	Zinc finger protein 544	**5,14**	chr19
ZNF545	284406	zinc finger protein 545	**2,72**	chr19
ZNF551	90233	zinc finger protein 551 /// zinc finger protein 551	**8,74**	chr19
ZNF553	197407	zinc finger protein 553	**2,52**	chr16
ZNF559	84527	zinc finger protein 559 /// zinc finger protein 559	**7,44**	chr19
ZNF560	147741	zinc finger protein 560	**2,40**	chr19
ZNF561	93134	zinc finger protein 561	**2,17**	chr5
ZNF562	54811	zinc finger protein 562	**2,60**	chr19
ZNF567	163081	zinc finger protein 567	**3,70**	chr19
ZNF573	126231	zinc finger protein 573	**2,62**	chr19
ZNF574	64763	zinc finger protein 574	**2,36**	chr19
ZNF586	54807	zinc finger protein 586	**4,70**	chr19
ZNF587	84914	Zinc finger protein 587	**2,11**	chr19
ZNF588	51427	zinc finger protein 588	**15,58**	chr7
ZNF589	51385	zinc finger protein 589	**16,80**	chr3
ZNF6	7552	zinc finger protein 6 (CMPX1)	**2,31**	chrX
ZNF600	162966	zinc finger protein 600	**2,66**	chr19
ZNF605	90462	zinc finger protein 605	**2,60**	chr12
ZNF606	80095	zinc finger protein 606	**2,32**	chr19
ZNF607	84775	zinc finger protein 607	**4,26**	chr19
ZNF608	57507	zinc finger protein 608	**3,16**	chr5
ZNF610	162963	zinc finger protein 610	**2,50**	chr19
ZNF614	80110	zinc finger protein 614	**4,51**	chr19
ZNF616	90317	zinc finger protein 616	**6,45**	chr19
ZNF638	27332	zinc finger protein 638	**3,74**	chr2
ZNF639	51193	zinc finger protein 639	**2,08**	chr3
ZNF643	65243	zinc finger protein 643	**3,02**	chr1
ZNF644	84146	zinc finger protein 644	**2,37**	chr1
ZNF649	65251	zinc finger protein 649	**9,20**	chr19
ZNF652	22834	Zinc finger protein 652	**5,10**	chr17
ZNF667	63934	Zinc finger protein 667	**4,41**	chr19
ZNF669	79862	zinc finger protein 669	**2,01**	chr1
ZNF670	93474	zinc finger protein 670	**4,26**	chr1
ZNF675	171392	zinc finger protein 675	**2,48**	chr19
ZNF677	342926	Zinc finger protein 677	**4,29**	chr19
ZNF678	339500	hypothetical protein MGC15634	**8,91**	chr1
ZNF680	340252	zinc finger protein 680	**8,15**	chr7
ZNF682	91120	zinc finger protein 682	**7,89**	chr19
ZNF689	115509	zinc finger protein 689	**3,65**	chr16
ZNF690	146050	zinc finger protein 690	**2,46**	chr15
ZNF691	51058	zinc finger protein 691	**3,92**	chr1
ZNF692	55657	zinc finger protein 692	**2,78**	chr1
ZNF694	342357	zinc finger protein 694	**2,16**	chr16
ZNF700	90592	zinc finger protein 700	**2,58**	chr19
ZNF708	7562	Zinc finger protein 708 (KOX8)	**4,08**	chr19
ZNF71	58491	zinc finger protein 71 (Cos26)	**2,03**	chr19

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ZNF74	7625	zinc finger protein 74 (Cos52)	**2,59**	chr22
ZNF75A	7627	zinc finger protein 75a	**2,46**	chr16
ZNF8	7554	zinc finger protein 8 (clone HF.18)	**3,31**	chr19
ZNF84	7637	Zinc finger protein 84 (HPF2)	**2,88**	chr12
ZNF85	7639	zinc finger protein 85 (HPF4, HTF1)	**8,00**	chr19
ZNF9	7555	zinc finger protein 9 (a cellular retroviral nucleic acid binding protein)	**2,06**	chr3
ZNF91	7644	Zinc finger protein 91 (HPF7, HTF10)	**3,68**	chr19
ZNF92	168374	zinc finger protein 92 (HTF12)	**6,21**	chr7
ZNHIT3	9326	zinc finger, HIT type 3	**2,36**	chr17
ZNRD1	30834	zinc ribbon domain containing, 1	**2,64**	chr6
ZNRF1	84937	zinc and ring finger 1	**2,07**	chr16
ZNRF2	223082	zinc and ring finger 2	**2,82**	chr7
ZNRF3	84133	zinc and ring finger 3	**4,12**	chr22
ZRANB3	84083	zinc finger, RAN-binding domain containing 3	**3,42**	chr2
ZRF1	27000	Zuotin related factor 1	**3,84**	chr7
ZSCAN2	54993	zinc finger and SCAN domain containing 2	**4,90**	chr15
ZSCAN5	79149	zinc finger and SCAN domain containing 5	**2,19**	chr19
ZSWIM3	140831	zinc finger, SWIM-type containing 3	**2,09**	chr20
ZSWIM6	57688	zinc finger, SWIM-type containing 6	**2,05**	chr5
ZWILCH	55055	Zwilch, kinetochore associated, homolog (Drosophila)	**4,18**	chr15
ZWINT	11130	ZW10 interactor	**6,94**	chr10
ZXDC	79364	ZXD family zinc finger C	**3,83**	chr3
ZYG11A	440590	zyg-11 homolog A (C. elegans)	**3,16**	chr1
		Primary neuroblastoma cDNA, clone:Nbla11652	**1040,31**	(vide)
		chromosome 10 open reading frame 58 /// chromosome 10 open reading frame	**7,09**	chr2
		reticulon 4 interacting protein 1 /// reticulon 4 interacting protein 1	**5,48**	chr2
		WW domain containing oxidoreductase	**4,92**	chr15
		Fanconi anemia, complementation group A /// Fanconi anemia, complementatio	**4,14**	chr20
		proteasome (prosome, macropain) subunit, beta type, 2 /// proteasome (prosom	**2,86**	chr19
		chromosome 1 open reading frame 25 /// chromosome 1 open reading frame 25	**2,44**	(vide)
		melanoma cell adhesion molecule /// melanoma cell adhesion molecule	**2,32**	chr8
		tubulin, beta, 2	**2,28**	(vide)
		zinc finger protein 146 /// zinc finger protein 146	**2,18**	chr6
		activating signal cointegrator 1 complex subunit 3-like 1 /// activating signal coint	**2,14**	chr7
		actin related protein 2/3 complex, subunit 5-like /// actin related protein 2/3 comp	**2,11**	chr2

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37500	4735	septin 2	2,38	chr2
39692	23176	septin 8	2,05	chr5
(vide)	(vide)	CDNA clone IMAGE:4152983	34,42	chr12
15E1.2	283459	Hypothetical protein LOC283459	2,71	chr12
76P	27229	Gamma tubulin ring complex protein (76p gene)	3,37	chr15
ABHD6	57406	abhydrolase domain containing 6	2,79	chr3
ABI2	10152	Abl interactor 2	2,23	chr2
ABL2	27	V-abl Abelson murine leukemia viral oncogene homolog 2 (arg, Abelson-related gene)	2,02	chr1
ACSBG2	81616	Acyl-CoA synthetase bubblegum family member 2	2,68	chr19
ACSL3	2181	Acyl-CoA synthetase long-chain family member 3	2,04	chr2
ACY1L2	135293	aminoacylase 1-like 2	2,50	chr6
ADAM17	6868	ADAM metallopeptidase domain 17 (tumor necrosis factor, alpha, converting enzyme)	2,02	chr2
ADAMTS18	170692	ADAM metallopeptidase with thrombospondin type 1 motif, 18	7,82	chr16
ADAMTS9	56999	ADAM metallopeptidase with thrombospondin type 1 motif, 9	19,15	chr3
ADSSL1	122622	adenylosuccinate synthase like 1	3,26	chr14
AFF4	27125	AF4/FMR2 family, member 4	3,76	chr5
AHSA2	130872	AHA1, activator of heat shock 90kDa protein ATPase homolog 2 (yeast)	3,01	chr2
AKAP9	10142	A kinase (PRKA) anchor protein (yotiao) 9	2,23	chr7
AKR1C1	1645	aldo-keto reductase family 1, member C1 (dihydrodiol dehydrogenase 1; 20-alpha (3-alpha)-hydroxys	2,43	chr10
AKR1C2	1646	aldo-keto reductase family 1, member C2 (dihydrodiol dehydrogenase 2; bile acid binding protein; 3-a	2,32	chr10
ALDH1A1	216	aldehyde dehydrogenase 1 family, member A1	8,67	chr9
AMY1A	277 /// 278 /// 279	amylase, alpha 1A; salivary /// amylase, alpha 1B; salivary /// amylase, alpha 1C; salivary /// amylase,	2,34	chr1
ANAPC5	51433	Anaphase promoting complex subunit 5	2,42	chr12
ANGPTL1	9068	Angiopoietin-like 1	2,45	chr1
ANK2	287	ankyrin 2, neuronal	4,55	chr4
ANKMY2	57037	ankyrin repeat and MYND domain containing 2	3,49	chr7
ANKRD38	163782	ankyrin repeat domain 38	21,36	chr1
ANKRD6	22881	ankyrin repeat domain 6	6,12	chr6
ANXA13	312	Annexin A13	2,90	chr1
AP3M1	26985	adaptor-related protein complex 3, mu 1 subunit	2,12	chr10
APCDD1	147495	adenomatosis polyposis coli down-regulated 1	2,95	chr18
AQP3	360	aquaporin 3	2,73	chr9
ARHGEF4	50649	Rho guanine nucleotide exchange factor (GEF) 4	2,38	chr2
ARNT2	9915	aryl-hydrocarbon receptor nuclear translocator 2	2,67	chr15

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ARX	170302	aristaless related homeobox	2,74	chrX
ASCC3L1	23020	Activating signal cointegrator 1 complex subunit 3-like 1	2,88	chr17
ASH1L	55870	POU domain, class 6, transcription factor 1	8,38	(vide)
ASTN	460	astrotactin	4,43	chr1
ATAD1	84896	ATPase family, AAA domain containing 1	2,19	chr10
ATP2B1	490	ATPase, Ca++ transporting, plasma membrane 1	3,56	chr12
ATP7B	540	ATPase, Cu++ transporting, beta polypeptide (Wilson disease)	3,42	chr13
B3GNT5	84002	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 5	3,05	chr3
BACH2	60468	BTB and CNC homology 1, basic leucine zipper transcription factor 2 /// BTB and CNC homology 1, b	4,16	chr6
BAT1	7919	HLA-B associated transcript 1	2,16	chr6
BBS1	582	Bardet-Biedl syndrome 1	2,61	chr11
BBS2	583	Bardet-Biedl syndrome 2	2,27	chr16
BCHE	590	butyrylcholinesterase	7,49	chr3
BCL2	596	B-cell CLL/lymphoma 2	2,47	chr18
BCL7A	605	B-cell CLL/lymphoma 7A	2,02	chr12
BDH1	622	3-hydroxybutyrate dehydrogenase, type 1	2,97	chr3
BIN1	274	bridging integrator 1	2,08	chr2
BIRC1	4671	baculoviral IAP repeat-containing 1	3,46	chr5
BOC	91653	brother of CDO	11,85	chr3
BRWD2	55717	bromodomain and WD repeat domain containing 2	3,05	chr10
BTAF1	9044	BTAF1 RNA polymerase II, B-TFIID transcription factor-associated, 170kDa (Mot1 homolog, S. cerev	2,00	chr10
BTBD5	54813	BTB (POZ) domain containing 5	2,46	chr14
BTG1	694	B-cell translocation gene 1, anti-proliferative	2,19	chr12
BZRAP1	9256	benzodiazapine receptor (peripheral) associated protein 1	2,39	chr17
C10orf104	119504	chromosome 10 open reading frame 104	2,81	chr10
C10orf18	54906	Chromosome 10 open reading frame 18	2,18	chr10
C10orf30	222389	Chromosome 10 open reading frame 30	2,34	chr10
C10orf33	84795	chromosome 10 open reading frame 33	2,13	chr10
C10orf38	221061	chromosome 10 open reading frame 38	2,17	chr10
C10orf46	143384	Chromosome 10 open reading frame 46	2,40	chr1
C10orf58	84293	Chromosome 10 open reading frame 58	3,91	chr10
C12orf22	81566	chromosome 12 open reading frame 22 /// chromosome 12 open reading frame 22	2,07	chr12
C14orf101	54916	chromosome 14 open reading frame 101	2,39	chr14
C14orf162	56936	chromosome 14 open reading frame 162	4,47	chr14

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C14orf32	93487	Chromosome 14 open reading frame 32	2,64	chr14
C14orf39	317761	chromosome 14 open reading frame 39	3,15	chr14
C14orf65	317762	chromosome 14 open reading frame 65	2,02	chr14
C15orf17	57184	chromosome 15 open reading frame 17	2,25	chr15
C15orf29	79768	chromosome 15 open reading frame 29	2,96	chr15
C16orf46	123775	Chromosome 16 open reading frame 46	2,60	(vide)
C16orf48	84080	chromosome 16 open reading frame 48	2,06	chr16
C16orf55	124045	chromosome 16 open reading frame 55	2,59	chr16
C17orf42	79736	Chromosome 17 open reading frame 42	2,99	chr17
C17orf45	125144	Chromosome 17 open reading frame 45	4,23	chr17
C18orf51	125704	chromosome 18 open reading frame 51	2,70	chr18
C1GALT1C1	29071	C1GALT1-specific chaperone 1	3,05	chrX
C1orf168	199920	chromosome 1 open reading frame 168	2,86	chr1
C1orf21	81563	chromosome 1 open reading frame 21 /// chromosome 1 open reading frame 21	2,25	chr1
C1orf63	57035	chromosome 1 open reading frame 63	2,16	chr1
C1orf9	51430	chromosome 1 open reading frame 9	2,08	chr1
C1RL	51279	complement component 1, r subcomponent-like	2,35	chr12
C20orf108	116151	chromosome 20 open reading frame 108	2,36	chr20
C20orf112	140688	chromosome 20 open reading frame 112	2,82	chr20
C20orf133	140733	chromosome 20 open reading frame 133	3,27	chr20
C20orf58	128414	chromosome 20 open reading frame 58	2,37	chr20
C20orf81	64773	chromosome 20 open reading frame 81	2,76	chr20
C21orf25	25966	chromosome 21 open reading frame 25	2,14	chr21
C2orf23	65055	chromosome 2 open reading frame 23	2,73	chr2
C2orf4	51072	Chromosome 2 open reading frame 4	2,57	chr2
C3orf15	89876	chromosome 3 open reading frame 15	7,16	chr3
C5	727	complement component 5	2,52	chr9
C5orf5	51306	chromosome 5 open reading frame 5	2,41	chr5
C6orf129	154467	chromosome 6 open reading frame 129	2,24	chr6
C6orf141	135398	chromosome 6 open reading frame 141	4,10	chr6
C6orf59	79992	chromosome 6 open reading frame 59	2,63	chr6
C8orf13	83648	chromosome 8 open reading frame 13	2,22	chr8
C8orf32	55093	chromosome 8 open reading frame 32	2,19	chr8
C8orf70	51101	Chromosome 8 open reading frame 70	2,13	chr8

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C8orf72	90362	chromosome 8 open reading frame 72	5,84	chr8
C9orf28	89853	chromosome 9 open reading frame 28	2,56	chr9
C9orf5	23731	chromosome 9 open reading frame 5	2,17	chr9
C9orf7	11094	chromosome 9 open reading frame 7	2,46	chr9
CABLES2	81928	Cdk5 and Abl enzyme substrate 2	2,03	chr20
CACNA1A	773	calcium channel, voltage-dependent, P/Q type, alpha 1A subunit	3,30	chr19
CALM2	805	Calmodulin 2 (phosphorylase kinase, delta)	2,30	chr2
CAND1	55832	cullin-associated and neddylation-dissociated 1	2,44	chr12
CAP350	9857	centrosome-associated protein 350	2,11	chr1
CAPN1	823	calpain 1, (mu/I) large subunit	3,99	chr11
CAPN6	827	calpain 6	6,34	chrX
CARD8	22900	caspase recruitment domain family, member 8	2,80	chr19
CASKIN1	57524	CASK interacting protein 1	2,06	chr16
CCDC3	83643	coiled-coil domain containing 3	3,17	chr10
CCDC52	152185	Coiled-coil domain containing 52	2,39	chr3
CCNL2	81669	cyclin L2	2,64	chr1_random
CCT6B	10693	chaperonin containing TCP1, subunit 6B (zeta 2)	2,07	chr17
CDC42BPB	9578	CDC42 binding protein kinase beta (DMPK-like)	2,84	chr14
CDK5RAP3	80279	CDK5 regulatory subunit associated protein 3	2,15	chr17
CDKL3	51265	cyclin-dependent kinase-like 3	2,12	chr5
CDV1	28981	carnitine deficiency-associated, expressed in ventricle 1	3,30	chr12
CEP1	11064	centrosomal protein 1	2,32	chr9
Cep164	22897	KIAA1052 protein	2,54	chr11
CHD9	80205	Chromodomain helicase DNA binding protein 9	3,66	chr16
CHN2	1124	Chimerin (chimaerin) 2	3,09	chr7
CHST5	23563	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 5	2,87	chr16
CHST5	23563 /// 84836	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 5 /// hypothetical protein MGC15429	2,15	chr16
CKLFSF3	123920	chemokine-like factor superfamily 3	2,39	chr16
CLK1	1195	CDC-like kinase 1	2,62	chr2
CMKOR1	57007	chemokine orphan receptor 1	4,25	chr2
CNTN2	6900	contactin 2 (axonal)	3,66	chr1
CNTN4	152330	contactin 4	4,47	chr3
COL22A1	169044	collagen, type XXII, alpha 1	2,71	chr8
COL27A1	85301	Collagen, type XXVII, alpha 1	2,69	chr9

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COL2A1	1280	collagen, type II, alpha 1 (primary osteoarthritis, spondyloepiphyseal dysplasia, congenital)	21,25	chr12
COL4A6	1288	collagen, type IV, alpha 6	8,80	chrX
COX4I1	1327	cytochrome c oxidase subunit IV isoform 1	2,15	chr16
CPAMD8	27151	C3 and PZP-like, alpha-2-macroglobulin domain containing 8	2,63	chr19
CPS1	1373	carbamoyl-phosphate synthetase 1, mitochondrial	4,28	chr2
CREM	1390	cAMP responsive element modulator	2,01	chr10
CROCC	9696	ciliary rootlet coiled-coil, rootletin	2,42	chr1
CRYZL1	9946	crystallin, zeta (quinone reductase)-like 1	3,27	chr21
CSK	1445	c-src tyrosine kinase	2,02	chr15
CSPG3	1463	chondroitin sulfate proteoglycan 3 (neurocan)	3,86	chr19
CTDSPL	10217	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase-like	2,40	chr3
CTGLF1	399753 /// 399761	centaurin, gamma-like family, member 1 /// hypothetical gene supported by AK093334; AL833330; BC	2,86	chr10
CTGLF1	399753 /// 399761	centaurin, gamma-like family, member 1 /// hypothetical gene supported by AK093334; AL833330; BC	2,44	chr10
CTNNA1	1495	Catenin (cadherin-associated protein), alpha 1, 102kDa	2,08	chr5
CTNNBIP1	56998	catenin, beta interacting protein 1	3,94	chr1
CTNND2	1501	catenin (cadherin-associated protein), delta 2 (neural plakophilin-related arm-repeat protein)	3,29	chr5
CUEDC1	404093	CUE domain containing 1	2,03	chr17
CXCL14	9547	chemokine (C-X-C motif) ligand 14	16,10	chr5
CXXC4	80319	CXXC finger 4	3,00	chr4
CYFIP2	26999	cytoplasmic FMR1 interacting protein 2 /// cytoplasmic FMR1 interacting protein 2	2,34	chr5
D2LIC	51626	dynein 2 light intermediate chain	2,17	chr2
DACH1	1602	dachshund homolog 1 (Drosophila)	27,40	chr13
DCHS1	8642	dachsous 1 (Drosophila)	2,11	chr11
DCT	1638	dopachrome tautomerase (dopachrome delta-isomerase, tyrosine-related protein 2)	17,25	chr13
DDX50	79009	DEAD (Asp-Glu-Ala-Asp) box polypeptide 50	2,13	chr10
DENND2A	27147	DENN/MADD domain containing 2A	3,98	chr7
DERA	51071	2-deoxyribose-5-phosphate aldolase homolog (C. elegans)	2,83	chr12
DGCR8	54487	DiGeorge syndrome critical region gene 8	2,06	chr22
DGKD	8527	diacylglycerol kinase, delta 130kDa	2,09	chr2
DHX32	55760	DEAH (Asp-Glu-Ala-His) box polypeptide 32	2,52	chr10
DHX57	90957	DEAH (Asp-Glu-Ala-Asp/His) box polypeptide 57	2,16	chr2
DICER1	23405	Dicer1, Dcr-1 homolog (Drosophila)	2,11	chr14
DIO3	1735	deiodinase, iodothyronine, type III	2,97	chr14
DIP2A	23181	DIP2 disco-interacting protein 2 homolog A (Drosophila)	2,66	chr21

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Gene Symbol	Entrez Gene	Gene Title	NPC_up	Chromosome Number(Avadis)
DKFZp313A2432	258010	hypothetical protein DKFZp313A2432	2,35	chr11
DKFZP434H0115	83538	hypothetical protein DKFZp434H0115	2,36	chr17
DKFZp451M2119	285023	Hypothetical protein DKFZp451M2119	3,08	chr2
DKFZP566N034	81615	hypothetical protein DKFZp566N034	2,62	chr2
DKFZP761N0912	57183	hypothetical protein DKFZp761N09121	10,12	(vide)
DKFZp761O2018	92293	hypothetical protein DKFZp761O2018	4,07	chr12
DKFZp762A217	160335	hypothetical protein DKFZp762A217	3,19	chr12
DLK1	8788	delta-like 1 homolog (Drosophila)	39,62	chr14
DMD	1756	dystrophin (muscular dystrophy, Duchenne and Becker types)	3,45	chrX
DMRT3	58524	doublesex and mab-3 related transcription factor 3	3,27	chr9
DMXL2	23312	Dmx-like 2	5,22	chr15
DNAJC12	56521	DnaJ (Hsp40) homolog, subfamily C, member 12	3,13	chr10
DNALI1	7802	dynein, axonemal, light intermediate polypeptide 1	4,36	chr1
DNM1	1759	dynamin 1	4,23	chr9
DOCK7	85440	Dedicator of cytokinesis 7	2,75	chr1
DPY19L2	283417	dpy-19-like 2 (C. elegans)	2,11	chr7
DPYSL5	56896	dihydropyrimidinase-like 5	3,84	chr2
DREV1	51108	DORA reverse strand protein 1	2,32	chr16
DSCR6	53820	Down syndrome critical region gene 6	2,65	chr21
DST	667	dystonin	4,69	chr6
DUSP4	1846	dual specificity phosphatase 4	7,87	chr8
ECHDC1	55862	Enoyl Coenzyme A hydratase domain containing 1	3,52	chr6
EFHD1	80303	EF-hand domain family, member D1	3,22	chr2
EFNA1	1942	ephrin-A1	2,08	chr1
EFNB2	1948	ephrin-B2	5,61	chr13
EFS	10278	embryonal Fyn-associated substrate	3,80	chr14
EIF2C3	192669	eukaryotic translation initiation factor 2C, 3	2,38	chr1
EIF2C4	192670	Eukaryotic translation initiation factor 2C, 4	2,87	chr1
ELAC1	55520	elaC homolog 1 (E. coli)	2,01	chr18
ELAVL4	1996	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 4 (Hu antigen D)	4,59	chr1
ELOVL5	60481	ELOVL family member 5, elongation of long chain fatty acids (FEN1/Elo2, SUR4/Elo3-like, yeast)	2,05	chr6
EMILIN2	84034	elastin microfibril interfacer 2 /// elastin microfibril interfacer 2	2,47	chr18
EML1	2009	echinoderm microtubule associated protein like 1	2,27	chr14
EMP2	2013	epithelial membrane protein 2	3,91	chr16

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EMX2	2018	empty spiracles homolog 2 (Drosophila)	10,30	chr10
EMX2OS	196047	empty spiracles homolog 2 (Drosophila) opposite strand	2,81	chr10
EPC1	80314	Enhancer of polycomb homolog 1 (Drosophila)	2,24	chr10
EPHA4	2043	EPH receptor A4	12,56	chr2
EPHB3	2049	EPH receptor B3	2,56	chr3
EVL	51466	Enah/Vasp-like	3,39	chr14
EYA1	2138	eyes absent homolog 1 (Drosophila)	3,91	chr8
EYA2	2139	eyes absent homolog 2 (Drosophila)	4,33	chr20
EYA4	2070	Eyes absent homolog 4 (Drosophila)	4,11	chr6
FAM13C1	220965	family with sequence similarity 13, member C1	2,78	chr10
FAM19A5	25817	family with sequence similarity 19 (chemokine (C-C motif)-like), member A5	2,06	chr22
FAM51A1	54960	Family with sequence similarity 51, member A1	2,03	chrX
FAM77D	286183	Family with sequence similarity 77, member D	5,59	chr8
FAM89A	375061	family with sequence similarity 89, member A	4,01	chr1
FANCA	2175	Fanconi anemia, complementation group A	2,35	chr16
FANK1	92565	fibronectin type III and ankyrin repeat domains 1	3,56	chr10
FARP1	10160	FERM, RhoGEF (ARHGEF) and pleckstrin domain protein 1 (chondrocyte-derived)	2,75	chr13
FBXL14	144699	F-box and leucine-rich repeat protein 14	6,25	chr12
FBXO33	254170	F-box protein 33	2,04	chr14
FBXW8	26259	F-box and WD-40 domain protein 8	2,27	chr12
FGF7	2252	Fibroblast growth factor 7 (keratinocyte growth factor)	2,25	(vide)
FGF9	2254	fibroblast growth factor 9 (glia-activating factor)	21,83	chr13
FHOD3	80206	formin homology 2 domain containing 3	7,10	chr18
FJX1	24147	four jointed box 1 (Drosophila)	6,85	chr11
FLJ10081	55683	hypothetical protein FLJ10081	2,26	chr2
FLJ10099	55069	Hypothetical protein FLJ10099	2,31	chr7
FLJ10159	55084	hypothetical protein FLJ10159	3,28	chr6
FLJ10178	55086	hypothetical protein FLJ10178	3,09	chrX
FLJ10287	54482	hypothetical protein FLJ10287	3,29	chr1
FLJ10996	54520	hypothetical protein FLJ10996	2,19	chr2
FLJ12700	79970	hypothetical protein FLJ12700	2,18	chr7
FLJ13197	79667	hypothetical protein FLJ13197	2,52	chr4
FLJ16008	339761	FLJ16008 protein	3,85	chr2
FLJ20719	55672	hypothetical protein FLJ20719	4,93	chr1

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FLJ21125	79680	hypothetical protein FLJ21125	2,04	chr22
FLJ21616	79618	Hypothetical protein FLJ21616	2,28	chr8
FLJ23191	79625	hypothetical protein FLJ23191	4,87	chr4
FLJ25476	149076	FLJ25476 protein	2,24	chr1
FLJ25694	283492	hypothetical protein FLJ25694	5,59	chr13
FLJ25715	284241	Hypothetical protein FLJ25715	2,12	chr18
FLJ30092	196515	AF-1 specific protein phosphatase /// AF-1 specific protein phosphatase	2,01	chr12
FLJ30901	150378	hypothetical protein FLJ30901	7,03	chr22
FLJ31438	130162	hypothetical protein FLJ31438	2,95	chr2
FLJ31818	154743	hypothetical protein FLJ31818	2,18	chr7
FLJ31951	153830	Hypothetical protein FLJ31951	3,92	chr5
FLJ34443	285464	hypothetical protein FLJ34443	2,90	chr4
FLJ36166	349152	Hypothetical protein FLJ36166	2,36	chr7
FLJ37440	129804	hypothetical protein FLJ37440	2,05	chr2
FLJ38379	285097	hypothetical protein FLJ38379	2,87	chr2
FLJ39155	133584	hypothetical protein FLJ39155	3,06	chr5
FLJ39653	202020	hypothetical protein FLJ39653	2,30	chr4
FLJ42393	401105	FLJ42393 protein	2,27	chr3
FLJ42957	400077	FLJ42957 protein	2,28	chr12
FLJ44216	375484	FLJ44216 protein	2,75	chr5
FLJ45187	387640	FLJ45187 protein	13,87	chr10
FLJ90757	440465	FLJ90757 protein	4,70	chr17
FLRT2	23768	fibronectin leucine rich transmembrane protein 2	6,72	chr14
FLRT3	23767	fibronectin leucine rich transmembrane protein 3	20,56	chr20
FNBP1	23048	Formin binding protein 1	3,16	chr9
FNBP4	23360	formin binding protein 4	2,24	chr11
FNDC5	252995	fibronectin type III domain containing 5	3,30	chr1
FOXG1B	2290	forkhead box G1B	14,70	chr14
FOXO3A	2309	forkhead box O3A	2,14	chr6
FRMD4A	1810 /// 55691	FERM domain containing 4A /// Down-regulator of transcription 1, TBP-binding (negative cofactor 2)	6,08	chr1
FRMD4B	23150	FERM domain containing 4B	2,36	chr3
FRZB	2487	frizzled-related protein	13,30	chr2
FSD1CL	405752	GTPase activating Rap/RanGAP domain-like 1	3,17	chr9
FSD1L	405752	FSD1-like	2,01	chr9

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FST	10468	follistatin	3,11	chr5
GAB2	9846	GRB2-associated binding protein 2	2,33	chr11
GABRP	2568	gamma-aminobutyric acid (GABA) A receptor, pi	15,76	chr5
GAD1	2571	glutamate decarboxylase 1 (brain, 67kDa)	3,77	chr2
GALNTL1	57452	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase-like 1	3,56	chr14
GAPVD1	26130	GTPase activating protein and VPS9 domains 1	2,15	(vide)
GAS1	2619	growth arrest-specific 1	29,68	chr9
GAS2L3	283431	growth arrest-specific 2 like 3	2,33	chr12
GAS7	8522	growth arrest-specific 7	2,85	chr17
GATA3	2625	GATA binding protein 3	5,80	chr10
GDPD1	284161	Glycerophosphodiester phosphodiesterase domain containing 1	2,17	chr17
GLI3	2737	GLI-Kruppel family member GLI3 (Greig cephalopolysyndactyly syndrome)	4,08	chr7
GLT25D2	23127	glycosyltransferase 25 domain containing 2	11,19	chr1
GLUD1	2746	glutamate dehydrogenase 1	2,37	chrX
GNAZ	2781	guanine nucleotide binding protein (G protein), alpha z polypeptide	4,73	chr22
GNG2	54331	Guanine nucleotide binding protein (G protein), gamma 2	2,66	chr14
GOLGA8A	23015	golgi autoantigen, golgin subfamily a, 8A	6,17	chr15
GOLGA8A	23015 /// 440270	golgi autoantigen, golgin subfamily a, 8A /// golgi autoantigen, golgin subfamily a, 8B	4,71	chr15
GOLGA8B	440270	golgi autoantigen, golgin subfamily a, 8B	5,30	chr15
GPC6	10082	Glypican 6	3,22	chr13
GPM6A	2823	glycoprotein M6A	17,26	chr4
GPR153	387509	G protein-coupled receptor 153	2,69	chr1
GPR24	2847	G protein-coupled receptor 24	2,29	chr22
GPR56	9289	G protein-coupled receptor 56	10,06	chr16
GPRASP1	9737	G protein-coupled receptor associated sorting protein 1	3,08	chrX
GRAMD1B	57476	GRAM domain containing 1B	2,28	chr11
GRIA1	2890	glutamate receptor, ionotropic, AMPA 1	4,04	chr5
GRM3	2913	glutamate receptor, metabotropic 3	3,02	chr7
GSDML	55876	gasdermin-like	2,64	chr17
GSTA4	2941	glutathione S-transferase A4	3,57	chr6
GUCY1A3	2982	guanylate cyclase 1, soluble, alpha 3	8,68	chr4
H19	283120	H19, imprinted maternally expressed untranslated mRNA	28,54	chr11
H2AFY2	55506	H2A histone family, member Y2	3,19	chr10
H3F3B	3021	H3 histone, family 3B (H3.3B)	2,65	chr12

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HDAC6	10013	histone deacetylase 6	2,43	chrX
HEL308	113510	DNA helicase HEL308	2,25	chr4
HES1	3280	hairy and enhancer of split 1, (Drosophila)	5,20	chr3
HES5	388585	hairy and enhancer of split 5 (Drosophila)	3,79	chr1
HHAT	55733	hedgehog acyltransferase	2,02	chr1
HIST1H2BD	3017	Histone 1, H2bd	2,88	chr6
HNRPR	10236	heterogeneous nuclear ribonucleoprotein R	3,46	chr1
HOMER2	9455	Homer homolog 2 (Drosophila)	2,13	chr15
HOXA1	3198	homeo box A1	3,61	chr7
HOXA9	3205	homeo box A9	3,29	chr7
HSA277841	55421	ELG protein	2,31	chr17
HSF2	3298	heat shock transcription factor 2	2,95	chr6
HSPA5BP1	54972	heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) binding protein 1	2,91	chr11
HTR1E	3354	5-hydroxytryptamine (serotonin) receptor 1E	2,01	chr6
ID2	3398	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	6,35	chr2
ID2	3398 /// 84099	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein /// inhibitor of DNA binding 2B, d	5,95	chr2
ID4	3400	Inhibitor of DNA binding 4, dominant negative helix-loop-helix protein	6,66	chr6
IFNGR1	3459	Interferon gamma receptor 1	2,05	chr6
IGSF11	152404	immunoglobulin superfamily, member 11	2,05	chr3
IGSF4	23705	Immunoglobulin superfamily, member 4	8,38	chr11
IL17D	53342	Interleukin 17D	2,19	chr13
INPP5E	56623	inositol polyphosphate-5-phosphatase, 72 kDa	2,21	chr9
INSM1	3642	insulinoma-associated 1	2,84	chr20
IQCE	23288	IQ motif containing E	2,16	chr7
ISL1	3670	ISL1 transcription factor, LIM/homeodomain, (islet-1)	4,91	chr5
ITGB8	3696	Integrin, beta 8	2,37	chr7
IVNS1ABP	10625	influenza virus NS1A binding protein	2,06	chr1
JAG1	182	Jagged 1 (Alagille syndrome)	3,09	chr20
JRK	8629	jerky homolog (mouse)	2,16	chr8
KALRN	8997	kalirin, RhoGEF kinase	2,89	chr3
KBTBD11	9920	kelch repeat and BTB (POZ) domain containing 11	2,36	chr8
KCNJ13	3769	potassium inwardly-rectifying channel, subfamily J, member 13	4,61	chr2
KCNJ2	3759	potassium inwardly-rectifying channel, subfamily J, member 2	2,38	chr17
KCNJ4	3761	potassium inwardly-rectifying channel, subfamily J, member 4	3,63	chr22

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KCNK10	54207	potassium channel, subfamily K, member 10	6,54	chr14
KCNT2	343450	potassium channel, subfamily T, member 2	4,19	chr1
KCTD1	284252	potassium channel tetramerisation domain containing 1	2,13	chr18
KIAA0101	9768	KIAA0101 /// KIAA0101	2,65	chr15
KIAA0500	57237	KIAA0500 protein	3,13	chr14
KIAA0515	84726	KIAA0515	2,11	chr9
KIAA0556	23247	KIAA0556 protein	2,03	chr16
KIAA0826	23045	KIAA0826	2,05	chr4
KIAA0889	25781	KIAA0889 protein	3,19	chr20
KIAA0895	23366	KIAA0895 protein	2,17	chr7
KIAA0960	23249	KIAA0960 protein	2,17	chr7
KIAA1102	22998	KIAA1102 protein	4,18	chr4
KIAA1217	56243	KIAA1217	3,05	chr10
KIAA1276	27146	KIAA1276 protein	2,63	chr4
KIAA1447	57597	KIAA1447 protein	4,03	chr17
KIAA1530	57654	KIAA1530 protein	3,20	chr4
KIAA1641	57730	KIAA1641	5,13	(vide)
KIAA1713	80816	KIAA1713	6,29	chr18
KIAA1772	80000	KIAA1772	7,10	chr18
KIAA1841	84542	KIAA1841 protein	2,92	chr2
KIAA1919	91749	KIAA1919	2,27	chr6
KIAA2022	340533	KIAA2022 protein	2,43	chrX
KIDINS220	57498	Kinase D-interacting substance of 220 kDa	2,05	chr2
KIF3A	11127	kinesin family member 3A	2,04	chr5
KLF11	8462	Kruppel-like factor 11	2,85	chr2
KLHDC8A	55220	Kelch domain containing 8A	9,89	chr1
KLHL14	57565	kelch-like 14 (Drosophila)	7,04	chr18
KLHL22	84861	kelch-like 22 (Drosophila)	2,78	chr22
KLHL24	54800	kelch-like 24 (Drosophila)	2,13	chr3
L3MBTL	26013	l(3)mbt-like (Drosophila)	2,49	chr20
LASS5	91012	LAG1 longevity assurance homolog 5 (S. cerevisiae)	2,08	chr12
LDOC1L	84247	leucine zipper, down-regulated in cancer 1-like	2,23	chr22
LEAP-2	116842	liver-expressed antimicrobial peptide 2	2,23	chr5
LEF1	51176	lymphoid enhancer-binding factor 1	12,44	chr4

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LEMD1	93273	LEM domain containing 1	3,95	chr1
LFNG	3955	lunatic fringe homolog (Drosophila)	2,74	chr7
LGI1	9211	leucine-rich, glioma inactivated 1	8,42	chr10
LGR5	8549	leucine-rich repeat-containing G protein-coupled receptor 5	6,45	chr12
LHX2	9355	LIM homeobox 2	135,71	chr9
LHX9	56956	LIM homeobox 9	3,81	chr1
LIX1	167410	Lix1 homolog (mouse)	24,29	chr5
LKAP	9665	limkain b1	2,03	chr16
LMO2	4005	LIM domain only 2 (rhombotin-like 1)	2,35	chr11
LMO3	55885	LIM domain only 3 (rhombotin-like 2)	26,62	chr12
LOC112476	112476	similar to lymphocyte antigen 6 complex, locus G5B; G5b protein; open reading frame 31	4,16	chr16
LOC113386	113386	similar to envelope protein	2,25	chr19
LOC144997	144997	hypothetical protein LOC144997	7,95	chr13
LOC147670	147670	hypothetical protein LOC147670	2,25	(vide)
LOC150759	150759	hypothetical protein LOC150759	4,35	chr2
LOC153682	153682	Hypothetical protein LOC153682	2,28	chr5
LOC158563	158563	hypothetical protein LOC158563	3,15	chrX
LOC220930	220930	hypothetical protein LOC220930	3,37	chr10
LOC221362	221362	hypothetical protein LOC221362	2,68	chr6
LOC221981	221981	hypothetical protein LOC221981	2,99	chr7
LOC255326	255326	hypothetical protein LOC255326	2,64	chr10
LOC284244	284244	hypothetical protein LOC284244	2,93	chr18
LOC284262	284262	hypothetical protein LOC284262	3,78	chr18
LOC284356	284356	hypothetical protein LOC284356	3,97	chr19
LOC284409	284409	hypothetical LOC284409	2,65	chr19
LOC285535	285535	hypothetical protein LOC285535	3,18	chr4
LOC285989	285989	hypothetical protein LOC285989	2,26	chr7
LOC286052	286052	hypothetical protein LOC286052	2,19	chr8
LOC286334	286334	Hypothetical protein LOC286334	2,61	chr9
LOC286382	286382	hypothetical protein LOC286382	2,95	chr9
LOC338758	338758	hypothetical protein LOC338758	3,78	chr12
LOC339025	339025	Hypothetical LOC339025	2,12	chr15
LOC339287	339287	hypothetical protein LOC339287	2,25	chr17
LOC340281	340281	hypothetical protein LOC340281	2,55	chr7

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LOC346355	346355 /// 392617	similar to RIKEN cDNA A930017N06 gene /// similar to RIKEN cDNA A930017N06 gene	2,25	chr7
LOC347475	347475	hypothetical gene supported by BC017958	2,57	chrX
LOC348094	348094	hypothetical protein LOC348094	2,40	chr15
LOC387790	387790	Hypothetical LOC387790	3,05	chr11
LOC387978	387978	hypothetical gene supported by BX248251	2,08	chr14
LOC388279	388279	Hypothetical gene supported by AF275804	2,54	chr16
LOC388969	388969	Hypothetical LOC388969	2,57	chr2
LOC389765	389765	similar to KIF27C	2,91	chr9
LOC390299	390299	Tetraspanin 11	3,03	chr12
LOC390551	390551 /// 440232	similar to hect domain and RLD 2 /// similar to hect domain and RLD 2	2,49	chr15_random
LOC391269	391269	Similar to ankyrin repeat domain 20A	2,23	chr21
LOC391491	391491	Similar to guanidinoacetate methyltransferase; GAMT	2,74	chr2
LOC399763	399763	similar to LINE-1 reverse transcriptase homolog	3,22	chr10
LOC400043	400043	hypothetical gene supported by BC009385	6,24	chr12
LOC400642	400642	hypothetical gene supported by BC041875; BX648984	2,53	chr18
LOC400685	400685	Hypothetical gene supported by BC045806	2,59	chr19
LOC400960	400960	hypothetical gene supported by BC040598	2,23	chr2
LOC401528	28 /// 401530 /// 4	hypothetical gene supported by BC032955 /// hypothetical gene supported by BC032955 /// hypothetic	5,57	chr9
LOC402485	402485	Hypothetical LOC401328	6,86	chr7
LOC402530	401363 /// 402530	Hypothetical protein FLJ25037 /// Hypothetical LOC441242	2,48	chr11
LOC439994	439994	hypothetical gene supported by AF064843; AK025716	2,22	chr2
LOC440135	440135	LOC440135	2,22	chr13
LOC440526	440526	LOC440526	2,16	chr19
LOC440934	440934	Hypothetical gene supported by BC008048	7,62	chr2
LOC440944	440944	Hypothetical gene supported by AK128398	2,50	chr3
LOC441300	441300	LOC441300	2,83	chr7
LOC441351	441351	Hypothetical gene supported by BX537900	4,46	chr8
LOC492304	492304	putative insulin-like growth factor II associated protein	16,83	chr11
LOC56757	56757	hypothetical protein LOC56757	3,05	chr5
LOC90110	90110	hypothetical protein LOC90110	2,99	chr17
LOC91316	91316	Similar to bK246H3.1 (immunoglobulin lambda-like polypeptide 1, pre-B-cell specific)	7,34	chr5
LOC91461	91461	hypothetical protein BC007901	5,60	chr2
LOC92162	92162	similar to RIKEN cDNA 2600017H02	6,69	chr17
LOC92312	92312	Hypothetical protein LOC92312	2,58	chr1

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LOC92691	92691	hypothetical protein BC008604	7,23	chr2
LPL	4023	lipoprotein lipase	3,81	chr8
LRCH2	57631	leucine-rich repeats and calponin homology (CH) domain containing 2	2,07	chrX
LRCH3	84859	leucine-rich repeats and calponin homology (CH) domain containing 3	3,56	chr3
LRP2	4036	Low density lipoprotein-related protein 2	21,79	chr2
LRP4	4038	low density lipoprotein receptor-related protein 4	3,17	chr11
LRRC3B	116135	leucine rich repeat containing 3B	2,35	chr3
LRRC49	54839	leucine rich repeat containing 49	2,20	chr15
LRRC4C	57689	leucine rich repeat containing 4C	3,58	chr11
LRRN3	54674	leucine rich repeat neuronal 3	6,49	chr7
LSAMP	4045	limbic system-associated membrane protein	2,27	chr3
LSM8	51691	LSM8 homolog, U6 small nuclear RNA associated (S. cerevisiae)	2,69	chr7
LUM	4060	lumican	16,09	chr12
LZIC	84328	Leucine zipper and CTNNBIP1 domain containing	2,15	chr1
MAB21L1	4081	mab-21-like 1 (C. elegans)	5,33	chr13
MAF	4094	v-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)	6,36	chr16
MAGI3	260425	membrane associated guanylate kinase, WW and PDZ domain containing 3	2,96	chr1
MAML3	55534	Mastermind-like 3 (Drosophila)	2,68	chr4
MAN2A2	4122	mannosidase, alpha, class 2A, member 2	2,72	chr15
MAP2	4133	Microtubule-associated protein 2	25,86	chr2
MAP2K1IP1	8649	Mitogen-activated protein kinase kinase 1 interacting protein 1	2,40	chr4
MAP6	4135	microtubule-associated protein 6	4,48	chr11
MAPK10	5602	mitogen-activated protein kinase 10	9,24	chr4
MARCH6	10299	membrane-associated ring finger (C3HC4) 6	2,16	chr5
MASP2	10747	Mannan-binding lectin serine peptidase 2	6,08	chr1
MCART6	401612	Mitochondrial carrier triple repeat 6	3,04	chrX
MCF2L	23263	MCF.2 cell line derived transforming sequence-like	3,95	chr13
ME3	10873	malic enzyme 3, NADP(+)-dependent, mitochondrial	8,66	chr11
MECP2	4204	methyl CpG binding protein 2 (Rett syndrome)	2,09	chrX
MEIS1	4211	Meis1, myeloid ecotropic viral integration site 1 homolog (mouse)	8,07	chr2
MGAT3	4248	Mannosyl (beta-1,4-)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase	2,44	chr22
MGC12760	84809	hypothetical protein MGC12760 /// hypothetical protein MGC12760	3,31	chr1
MGC13057	84281	Hypothetical protein MGC13057	2,58	chr2
MGC15407	112942	Similar to RIKEN cDNA 4931428D14 gene	2,54	chr2

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MGC15875	85007	hypothetical protein MGC15875	2,82	chr5
MGC17839	219902	hypothetical protein MGC17839	2,07	chr11
MGC21644	153768	Hypothetical protein MGC21644	2,08	chr5
MGC25181	257054	hypothetical protein MGC25181	2,26	chr2_random
MGC2803	79002	hypothetical protein MGC2803	2,14	chr19
MGC3032	65998	hypothetical protein MGC3032	2,54	chr11
MGC3121	78994	hypothetical protein MGC3121	2,11	chr16
MGC33212	255758	hypothetical protein MGC33212	2,44	chr3
MGC33302	256471	Hypothetical protein MGC33302	2,33	chr4
MGC35048	124152	hypothetical protein MGC35048	2,96	chr16
MGC35097	200942	hypothetical protein MGC35097	3,06	chr3
MGC35366	144193	hypothetical protein MGC35366	2,52	chr12
MGC40499	245812	hypothetical protein MGC40499	2,01	chr7
MGC4707	79096	MGC4707 protein	2,40	chr11
MGC52110	493753	hypothetical protein MGC52110	2,02	chr2
MGC5509	79074	Hypothetical protein MGC5509	3,05	chr2
MGC5576	79022	hypothetical protein MGC5576	2,35	chr12
MID1	4281	Midline 1 (Opitz/BBB syndrome)	2,52	chrX
MKL2	57496	MKL/myocardin-like 2	2,04	chr16
MLLT3	4300	Myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 3	2,02	chr9
MLR1	254251	transcription factor MLR1	2,49	chr4
MMRN1	22915	multimerin 1	2,24	chr4
MON2	23041	MON2 homolog (yeast)	2,64	chr12
MORF4L2	9643	Mortality factor 4 like 2	2,04	chrX
MSRB2	22921	methionine sulfoxide reductase B2	2,21	chr10
MST1	4485	macrophage stimulating 1 (hepatocyte growth factor-like)	2,15	chr1
MTERFD3	80298	MTERF domain containing 3	2,20	chr12
MUM1L1	139221	melanoma associated antigen (mutated) 1-like 1	3,66	chrX
MUSTN1	389125	musculoskeletal, embryonic nuclear protein 1	2,37	chr3
MYST3	7994	MYST histone acetyltransferase (monocytic leukemia) 3	2,94	chr8
NAB1	4664	NGFI-A binding protein 1 (EGR1 binding protein 1)	2,65	chr2
NAB2	4665	NGFI-A binding protein 2 (EGR1 binding protein 2)	2,01	chr12
NAPE-PLD	222236	N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D	2,16	chr7
NCALD	83988	neurocalcin delta /// neurocalcin delta	10,89	chr8

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NCAM1	4684	neural cell adhesion molecule 1	13,84	chr11
NCOA6	23054	nuclear receptor coactivator 6	2,51	chr20
NCOR1	9611	Nuclear receptor co-repressor 1	2,05	chr17
NDN	4692	necdin homolog (mouse)	2,01	chr15
NEK3	4752	NIMA (never in mitosis gene a)-related kinase 3	2,55	chr13
NEK9	91754	NIMA (never in mitosis gene a)- related kinase 9	4,50	chr14
NEUROD1	4760	neurogenic differentiation 1	2,50	chr2
NFATC1	4772	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1	2,57	chr18
NHLH2	4808	nescient helix loop helix 2	2,79	chr1
NHLRC2	374354	NHL repeat containing 2	2,24	chr10
NISCH	11188	nischarin	2,21	chr3
NKTR	4820	natural killer-tumor recognition sequence	2,73	chr3
NLGN1	22871	neuroligin 1	3,38	chr3
NME5	8382	non-metastatic cells 5, protein expressed in (nucleoside-diphosphate kinase)	2,77	chr5
NOPE	57722	likely ortholog of mouse neighbor of Punc E11	5,49	chr15
NOTCH1	4851	Notch homolog 1, translocation-associated (Drosophila)	2,73	chr9
NPY2R	4887	neuropeptide Y receptor Y2	3,47	chr4
NR2E1	7101	nuclear receptor subfamily 2, group E, member 1	3,16	chr6
NR2F1	7025	Nuclear receptor subfamily 2, group F, member 1	8,52	chr5
NRCAM	4897	neuronal cell adhesion molecule	8,28	chr7
NRG1	3084	neuregulin 1	10,33	chr8
NTRK2	4915	neurotrophic tyrosine kinase, receptor, type 2	2,92	chr9
NUDT6	11162	nudix (nucleoside diphosphate linked moiety X)-type motif 6	2,77	chr4
OBSL1	23363	obscurin-like 1	2,53	chr2
ODZ4	26011	odz, odd Oz/ten-m homolog 4 (Drosophila)	3,54	chr11
OGT	8473	O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine:polypeptide-N-acetyl	2,02	chrX
OSBPL9	114883	Oxysterol binding protein-like 9	2,60	chr1
P18SRP	285672	p18 splicing regulatory protein	2,20	chr5
PAPD4	167153	PAP associated domain containing 4	2,34	chr5
PAPOLA	10914	poly(A) polymerase alpha	2,22	chr14
PARC	23113	p53-associated parkin-like cytoplasmic protein	2,04	chr6
PARD6G	84552	par-6 partitioning defective 6 homolog gamma (C. elegans)	2,10	chr18
PARP6	56965	poly (ADP-ribose) polymerase family, member 6	2,49	chr15
PAWR	5074	PRKC, apoptosis, WT1, regulator	2,01	chr20

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PAX3	5077	paired box gene 3 (Waardenburg syndrome 1)	7,02	chr2
PAX6	5080	paired box gene 6 (aniridia, keratitis)	92,78	chr11
PCDH17	27253	Protocadherin 17	6,86	chr13
PCDH18	54510	protocadherin 18	2,59	chr4
PCDHB14	56122	protocadherin beta 14	2,58	chr5
PCMTD1	115294	Protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 1	3,12	chr8
PCSK5	5125	Proprotein convertase subtilisin/kexin type 5	4,59	chr9
PEG10	23089	paternally expressed 10	2,75	chr7
PFAAP5	10443	Hypothetical gene CG012	4,32	chr13
PGM5	5239	phosphoglucomutase 5	3,61	chr9
PHF2	5253	PHD finger protein 2	2,74	chr9
PHTF1	10745	putative homeodomain transcription factor 1	2,09	chr1
PIAS1	8554	protein inhibitor of activated STAT, 1	2,92	chr15
PIK3R1	5295	phosphoinositide-3-kinase, regulatory subunit 1 (p85 alpha)	3,61	chr5
PIK3R3	8503	phosphoinositide-3-kinase, regulatory subunit 3 (p55, gamma)	3,93	chr1
PIK4CA	5297	phosphatidylinositol 4-kinase, catalytic, alpha polypeptide	2,09	chr22
PIK4CA	220686 /// 5297	phosphatidylinositol 4-kinase, catalytic, alpha polypeptide /// hypothetical protein LOC220686	2,84	chr22
PITPNB	23760	Phosphatidylinositol transfer protein, beta	2,04	chr22
PKIA	5569	Protein kinase (cAMP-dependent, catalytic) inhibitor alpha	3,14	chr8
PKNOX2	63876	PBX/knotted 1 homeobox 2	5,62	chr11
PLCE1	51196	phospholipase C, epsilon 1	2,01	chr10
PLEKHA1	59338	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 1	2,26	chr10
PLEKHG1	57480	pleckstrin homology domain containing, family G (with RhoGef domain) member 1	9,86	chr6
PLXNA1	5361	plexin A1	2,39	chr3
PLXNC1	10154	plexin C1	3,11	chr12
POLR2J2	246721	DNA directed RNA polymerase II polypeptide J-related gene	2,34	chr7
POMT1	10585	protein-O-mannosyltransferase 1	2,28	chr9
POU3F2	5454	POU domain, class 3, transcription factor 2	3,76	chr6
POU4F1	5457	POU domain, class 4, transcription factor 1	3,70	chr13
PPFIBP1	440091 /// 8496	PTPRF interacting protein, binding protein 1 (liprin beta 1) /// similar to PTPRF interacting protein bind	3,77	chr12
PPP2R5C	5527	protein phosphatase 2, regulatory subunit B (B56), gamma isoform	2,17	chr14
PPT2	80864 /// 9374	palmitoyl-protein thioesterase 2 /// EGF-like-domain, multiple 8	3,63	chr6
PREX1	57580	phosphatidylinositol 3,4,5-trisphosphate-dependent RAC exchanger 1	2,79	chr20
PRKD1	5587	protein kinase D1	2,52	chr14

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PRKRA	8575	protein kinase, interferon-inducible double stranded RNA dependent activator	2,22	chr2
PROS1	5627	protein S (alpha)	5,53	chr3
PRR3	80742	proline rich 3	2,05	chr6
PSCD2	9266	Pleckstrin homology, Sec7 and coiled-coil domains 2 (cytohesin-2)	2,30	chr19
PSEN1	5663	Presenilin 1 (Alzheimer disease 3)	2,50	chr14
PTK2	5747	PTK2 protein tyrosine kinase 2	2,47	chr8
PTN	5764	pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1)	3,49	chr7
PTPN13	5783	Protein tyrosine phosphatase, non-receptor type 13 (APO-1/CD95 (Fas)-associated phosphatase)	2,57	chr4
PURG	29942	purine-rich element binding protein G	4,14	chr8
PVRL3	25945	Poliovirus receptor-related 3	2,81	chr3
PXMP3	5828	Peroxisomal membrane protein 3, 35kDa (Zellweger syndrome)	2,02	chr8
RAB6IP1	23258	RAB6 interacting protein 1	2,27	chr11
RABGAP1	23637	RAB GTPase activating protein 1	2,73	chr9
RABL2B	11158 /// 11159	RAB, member of RAS oncogene family-like 2B /// RAB, member of RAS oncogene family-like 2A	2,34	chr2
RAI17	57178	retinoic acid induced 17	2,34	chr10
RALGDS	5900	ral guanine nucleotide dissociation stimulator	2,97	chr9
RANBP2L2	440872	Ran binding protein 2-like 2	2,63	chr2
RAP140	23272	retinoblastoma-associated protein 140	2,22	chr3
RASA2	5922	RAS p21 protein activator 2	2,88	chr3
RASA4 /// FLJ21	10156 /// 401331	RAS p21 protein activator 4 /// hypothetical protein FLJ21767	2,08	chr7
RASGRP1	10125	RAS guanyl releasing protein 1 (calcium and DAG-regulated)	3,62	chr15
RBM33	155435	RNA binding motif protein 33	2,38	chr7
RBM4B	83759	RNA binding motif protein 4B	2,49	chr11
RBM5	10181	RNA binding motif protein 5	2,63	chr3
RBMS1	5937	RNA binding motif, single stranded interacting protein 1	2,61	chr2
RCOR3	55758	REST corepressor 3	2,47	chr1
RELN	5649	reelin	15,67	chr7
RGS12	6002	regulator of G-protein signalling 12	2,04	chr4
RHOU	58480	ras homolog gene family, member U	6,94	chr1
RNF144	9781	ring finger protein 144	2,53	chr2
RNF165	494470	ring finger protein 165	9,91	chr18
ROBO1	6091	Roundabout, axon guidance receptor, homolog 1 (Drosophila)	2,78	chr3
ROBO2	6092	roundabout, axon guidance receptor, homolog 2 (Drosophila)	3,59	chr3
ROR2	4920	receptor tyrosine kinase-like orphan receptor 2	2,65	chr9

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RP3-473B4.1	159091	Hypothetical protein BC017868	2,80	chrX
RPL28	6158	ribosomal protein L28	2,02	chr19
RPL31	6160	ribosomal protein L31	3,69	chr2
RPS15A	6210	Ribosomal protein S15a	2,67	chr16
RPS29	6235	Ribosomal protein S29	2,38	chr14
RRN3	54700	RRN3 RNA polymerase I transcription factor homolog (yeast)	2,13	chr16
RSBN1	54665	round spermatid basic protein 1	2,23	chr1
RSPO3	84870	R-spondin 3 homolog (Xenopus laevis)	5,79	chr6
RUTBC1	9905	RUN and TBC1 domain containing 1	2,40	chr17
SAPS2	9701	SAPS domain family, member 2	2,14	chr22
SBF2	81846	SET binding factor 2	2,11	chr11
SCC-112	23244	SCC-112 protein	2,34	chr4
SCFD1	23256	Sec1 family domain containing 1	2,07	chr14
SCMH1	22955	sex comb on midleg homolog 1 (Drosophila)	2,04	chr1
SCUBE2	57758	signal peptide, CUB domain, EGF-like 2	2,88	chr11
SDHAL2	255812	succinate dehydrogenase complex, subunit A, flavoprotein-like 2	3,76	chr3
SDK1	221935	sidekick homolog 1 (chicken)	2,89	chr7
SDK2	54549	sidekick homolog 2 (chicken)	13,25	chr17
SEC15L1	54536	SEC15-like 1 (S. cerevisiae)	2,41	chr10
SEC6L1	11336	SEC6-like 1 (S. cerevisiae)	2,53	chr5
SELENBP1	8991	selenium binding protein 1 /// selenium binding protein 1	2,12	chr1
SEMA3A	10371	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A	2,56	chr7
SEMA6D	80031	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D	4,35	chr15
SENP7	57337	SUMO1/sentrin specific peptidase 7	2,13	chr3
SERTAD4	56256	SERTA domain containing 4	2,68	chr1
SESN3	143686	Sestrin 3	5,17	chr11
SETBP1	26040	SET binding protein 1	3,15	chr18
SETD5	55209	SET domain containing 5	2,25	chr3
SETD6	79918	SET domain containing 6	2,02	chr16
SEZ6L	23544	Seizure related 6 homolog (mouse)-like	3,21	chr22
SFI1	9814	Sfi1 homolog, spindle assembly associated (yeast)	2,49	chr22
SFRS14	10147	Splicing factor, arginine/serine-rich 14	2,20	chr19
SFRS2IP	9169	Splicing factor, arginine/serine-rich 2, interacting protein	3,45	chr12
SH3BGRL2	83699	SH3 domain binding glutamic acid-rich protein like 2	2,84	chr6

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SHANK3	85358	SH3 and multiple ankyrin repeat domains 3	2,51	chr22
SHC2	25759	SHC (Src homology 2 domain containing) transforming protein 2	2,99	chr19
SHRM	57619	Shroom	2,20	chr4
SIX3	6496	Sine oculis homeobox homolog 3 (Drosophila)	37,88	chr2
SIX6	4990	sine oculis homeobox homolog 6 (Drosophila)	6,24	chr14
SLC16A14	151473	solute carrier family 16 (monocarboxylic acid transporters), member 14	3,79	chr2
SLC1A3	6507	solute carrier family 1 (glial high affinity glutamate transporter), member 3	3,22	chr5
SLC25A27	9481	solute carrier family 25, member 27	4,25	chr6
SLC30A1	7779	Solute carrier family 30 (zinc transporter), member 1	2,12	chr1
SLC35E2	9906	solute carrier family 35, member E2	3,24	chr1
SLC4A7	9497	solute carrier family 4, sodium bicarbonate cotransporter, member 7	2,04	chr3
SLC5A3	6526	solute carrier family 5 (inositol transporters), member 3	4,29	chr21
SLC6A16	28968	Solute carrier family 6, member 16	7,77	chr19
SLC9A3	6550	Solute carrier family 9 (sodium/hydrogen exchanger), member 3	2,28	chr5
SLIT2	9353	slit homolog 2 (Drosophila)	7,63	chr4
SLITRK4	139065	SLIT and NTRK-like family, member 4	2,70	chrX
SLITRK6	84189	SLIT and NTRK-like family, member 6	6,19	chr13
SLN	6588	sarcolipin	4,50	chr11
SMAD5	4090	SMAD, mothers against DPP homolog 5 (Drosophila)	2,22	chr5
SNF8	11267	SNF8, ESCRT-II complex subunit, homolog (S. cerevisiae)	2,33	chr17
SNX1	6642	sorting nexin 1	2,14	chr15
SORCS1	114815	sortilin-related VPS10 domain containing receptor 1	3,02	chr10
SORCS2	57537	sortilin-related VPS10 domain containing receptor 2	3,39	chr4
SOSTDC1	25928	sclerostin domain containing 1	2,01	chr7
SOX1	6656	SRY (sex determining region Y)-box 1	8,01	chr13
SOX10	6663	SRY (sex determining region Y)-box 10	2,90	chr22
SOX5	6660	SRY (sex determining region Y)-box 5	28,58	chr12
SOX6	55553	SRY (sex determining region Y)-box 6	7,05	chr11
SPA17	53340	sperm autoantigenic protein 17	3,09	chr11
SPPL3	121665	signal peptide peptidase 3	2,02	chr12
SRGAP3	9901	SLIT-ROBO Rho GTPase activating protein 3	6,11	chr3
SRP54	6729	Signal recognition particle 54kDa	2,10	chr14
SSPO	23145	SCO-spondin homolog (Bos taurus)	2,06	chr7
SST	6750	somatostatin	5,09	chr3

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ST6GALNAC5	81849	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltran	8,46	chr1
ST7L	54879	Suppression of tumorigenicity 7 like	7,03	chr1
ST8SIA2	8128	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 2	7,30	(vide)
STMN2	11075	stathmin-like 2	12,77	chr8
STMN4	81551	stathmin-like 4 /// stathmin-like 4	3,21	chr8
STOX1	219736	storkhead box 1	2,04	chr10
STT3B	201595	STT3, subunit of the oligosaccharyltransferase complex, homolog B (S. cerevisiae)	2,12	chr3
STX7	8417	Syntaxin 7	2,33	chr6
SUPT7L	9913	suppressor of Ty 7 (S. cerevisiae)-like	2,06	chr2
SVIL	6840	supervillin	2,59	chr10
SYT11	23208	synaptotagmin XI	3,88	chr1
TAGLN3	29114	transgelin 3	3,36	chr3
TAIP-2	80034	TGF-beta induced apotosis protein 2	2,28	chr2
TBC1D3	414060 /// 84218	TBC1 domain family, member 3 /// TBC1 domain family, member 3C	6,00	chr17_random
TBRG1	84897	transforming growth factor beta regulator 1	2,48	chr11
TDRD7	23424	tudor domain containing 7	3,05	chr9
TFAP2B	7021	transcription factor AP-2 beta (activating enhancer binding protein 2 beta)	13,06	chr6
THSD1	374500 /// 55901	thrombospondin, type I, domain containing 1 /// thrombospondin, type I, domain containing 1 pseudog	3,05	chr13
TLE4	7091	transducin-like enhancer of split 4 (E(sp1) homolog, Drosophila)	4,03	chr9
TMCC3	57458	Transmembrane and coiled-coil domain family 3	2,53	chr12
TMEFF2	23671	transmembrane protein with EGF-like and two follistatin-like domains 2	9,12	chr2
TMEM2	23670	transmembrane protein 2	2,97	chr9
TMEM20	159371	transmembrane protein 20	2,31	chr10
TMEM29	29057	transmembrane protein 29	2,03	chrX
TMEM46	387914	transmembrane protein 46	4,82	chr13
TMTC2	160335	Transmembrane and tetratricopeptide repeat containing 2	2,11	chr12
TNFRSF19	55504	tumor necrosis factor receptor superfamily, member 19	8,90	chr9
TPBG	7162	trophoblast glycoprotein	6,71	chr6
TRO	7216	trophinin /// trophinin	2,25	chrX
TRPM3	80036	transient receptor potential cation channel, subfamily M, member 3	3,58	chr9
TRPM8	79054	transient receptor potential cation channel, subfamily M, member 8	2,24	chr2
TSGA14	95681	testis specific, 14	3,15	chr7
TSPAN14	81619	tetraspanin 14	2,32	chr10
TSPAN3	10099	Tetraspanin 3	2,18	chr15

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Gene Symbol	Entrez Gene	Gene Title	NPC_up	Chromosome Number(Avadis)
TSPYL2	64061	TSPY-like 2	2,03	chrX
TSPYL4	23270	TSPY-like 4	2,30	chr6
TTBK2	146057	tau tubulin kinase 2	2,27	chr15
TTC10	8100	tetratricopeptide repeat domain 10	2,70	chr13
TTC12	54970	tetratricopeptide repeat domain 12	2,99	chr11
TTC14	151613	Tetratricopeptide repeat domain 14	2,11	chr3
TTC17	55761	tetratricopeptide repeat domain 17	2,90	chr11
TTYH1	57348	tweety homolog 1 (Drosophila)	2,45	chr19
UBE2E3	10477	Ubiquitin-conjugating enzyme E2E 3 (UBC4/5 homolog, yeast)	2,28	chr2
UBE2R2	54926	ubiquitin-conjugating enzyme E2R 2	2,65	chr9
UCP2	7351	uncoupling protein 2 (mitochondrial, proton carrier)	2,13	chr11
UHRF1	29128	ubiquitin-like, containing PHD and RING finger domains, 1	2,29	chr12
USP49	25862	Ubiquitin specific peptidase 49	3,11	chr6
VASH1	22846	vasohibin 1	2,51	chr14
VGLL4	9686	vestigial like 4 (Drosophila)	2,40	chr3
VTCN1	79679	V-set domain containing T cell activation inhibitor 1	5,12	chr1
WASF1	8936	WAS protein family, member 1	2,05	chr6
WASF3	10810	WAS protein family, member 3	4,31	chr13
WDR19	57728	WD repeat domain 19	2,60	chr4
WDR61	80349	WD repeat domain 61	2,14	chr15
WDTC1	23038	WD and tetratricopeptide repeats 1	2,17	chr1
WDTC2	9742	WD and tetratricopeptide repeats 2	2,08	chr16
WFIKKN1	117166	WAP, follistatin/kazal, immunoglobulin, kunitz and netrin domain containing 1	2,98	chr16
WNT2B	7482	wingless-type MMTV integration site family, member 2B	3,80	chr1
WNT5A	7474	wingless-type MMTV integration site family, member 5A	5,15	chr3
WSB1	26118	WD repeat and SOCS box-containing 1	7,05	chr17
WWOX	51741	B-box and SPRY domain containing	2,51	chr16
YAF2	10138	YY1 associated factor 2	4,72	chr12
YEATS2	55689	YEATS domain containing 2	3,40	chr3
ZBTB10	65986	Zinc finger and BTB domain containing 10	2,33	chr8
ZBTB16	7704	zinc finger and BTB domain containing 16	12,49	chr11
ZBTB33	10009	zinc finger and BTB domain containing 33	2,01	chrX
ZC3H12B	340554	zinc finger CCCH-type containing 12B	2,18	chrX
ZC3H12C	85463	zinc finger CCCH-type containing 12C	2,07	chr11

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ZC3H8	84524	Zinc finger CCCH-type containing 8	2,17	chr2
ZCSL3	120526	Zinc finger, CSL-type containing 3	2,67	chr11
ZFP90	146198	Zinc finger protein 90 homolog (mouse)	3,17	chr16
ZFR	51663	Zinc finger RNA binding protein	2,01	chr5
ZFYVE16	9765	zinc finger, FYVE domain containing 16	4,24	chr5
ZIC1	7545	Zic family member 1 (odd-paired homolog, Drosophila)	24,39	chr3
ZNF117	7670	Zinc finger protein 117 (HPF9)	5,39	chr7
ZNF161	7716	zinc finger protein 161	2,75	chr3
ZNF177	7730	zinc finger protein 177	2,53	chr19
ZNF193	7746	zinc finger protein 193	2,42	chr6
ZNF218	128553	Zinc finger protein 218	2,30	chr20
ZNF264	9422	zinc finger protein 264	2,17	chr19
ZNF266	10781	zinc finger protein 266	2,46	chr19
ZNF274	10782	zinc finger protein 274	2,12	chr19
ZNF297B	23099	zinc finger protein 297B	2,24	chr9
ZNF334	55713	zinc finger protein 334	2,12	chr20
ZNF346	23567	zinc finger protein 346	3,63	chr5
ZNF354B	117608	Zinc finger protein 354B	2,27	chr5
ZNF37B	256112	zinc finger protein 37b (KOX 21)	2,25	chr10
ZNF390	222696	zinc finger protein 390	2,16	chr6
ZNF42	7593	zinc finger protein 42 (myeloid-specific retinoic acid-responsive)	2,01	chr19
ZNF452	114821	zinc finger protein 452	2,01	(vide)
ZNF471	57573	Zinc finger protein 471	2,20	chr19
ZNF510	22869	Zinc finger protein 510	2,15	chr9
ZNF514	84874	zinc finger protein 514	3,44	chr2
ZNF521	25925	zinc finger protein 521	13,21	chr18
ZNF533	151126	zinc finger protein 533	4,31	chr2
ZNF580	51157	zinc finger protein 580	2,39	chr19
ZNF618	114991	zinc finger protein 618	2,82	chr9
ZNF621	285268	zinc finger protein 621	2,13	chr3
ZNF629	23361	zinc finger protein 629	2,66	chr16
ZNF641	121274	zinc finger protein 641	3,75	chr12
ZNF664	144348	zinc finger protein 664	4,39	chr12
ZNF709	163051	zinc finger protein 709	2,86	chr19

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ZNF83	55769	Zinc finger protein 83 (HPF1)	3,79	chr19
		myosin, light polypeptide kinase /// myosin, light polypeptide kinase	4,39	chr6
		secreted protein, acidic, cysteine-rich (osteonectin) /// secreted protein, acidic, cysteine-rich (osteone	2,25	chr16

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Gene Symbol	Entrez Gene	Gene Title	NPC_up	MPC_down	Chromosome Number(Avadis)
AFG3L1	172	AFG3 ATPase family gene 3-like 1 (yeast)	2,26	3,66	chr16
AGPAT4	56895	1-acylglycerol-3-phosphate O-acyltransferase 4 (lysophosphatidic acid acyltransferase	3,89	2,37	chr6
AGTPBP1	23287	ATP/GTP binding protein 1	3,23	5,09	chr9
AKAP13	11214	A kinase (PRKA) anchor protein 13	2,53	2,67	chr15
AMPH	273	amphiphysin (Stiff-Man syndrome with breast cancer 128kDa autoantigen)	2,77	2,91	chr7
ANAPC7	51434	anaphase promoting complex subunit 7	2,70	2,60	chr12
ANKHD1 /// MAS	404734	ankyrin repeat and KH domain containing 1 /// MASK-4E-BP3 alternate reading frame	2,18	2,16	chr5
ANKRD10	55608	Ankyrin repeat domain 10	2,05	9,14	chr13
API5	8539	Apoptosis inhibitor 5	2,93	2,49	chr11
ARHGAP28	79822	Rho GTPase activating protein 28	2,76	5,70	chr18
ARHGEF7	8874	Rho guanine nucleotide exchange factor (GEF) 7	2,59	3,83	chr13
ARID1B	57492	AT rich interactive domain 1B (SWI1-like)	2,02	3,16	chr6
ARID2	196528	AT rich interactive domain 2 (ARID, RFX-like)	2,53	3,78	chr12
ARMC8	25852	armadillo repeat containing 8	2,52	2,79	chr3
ATP11A	23250	ATPase, Class VI, type 11A	2,28	2,66	chr13
ATP1A2	477	ATPase, Na+/K+ transporting, alpha 2 (+) polypeptide	2,48	8,72	chr1
ATRX	546	Alpha thalassemia/mental retardation syndrome X-linked (RAD54 homolog, S. cerevis	2,13	6,07	chrX
BCL2L11	10018	BCL2-like 11 (apoptosis facilitator)	3,19	9,23	chr2
BIRC6	57448	Splicing factor, arginine/serine-rich 12	2,11	2,37	chr2
BMP7	655	Bone morphogenetic protein 7 (osteogenic protein 1)	2,09	4,44	chr20
BRUNOL5	60680	bruno-like 5, RNA binding protein (Drosophila)	3,57	6,41	chr19
BST2	684	bone marrow stromal cell antigen 2	2,18	13,21	chr19
BTBD3	22903	BTB (POZ) domain containing 3	2,86	2,36	chr20
C1orf104	284618	Chromosome 1 open reading frame 104	2,31	3,02	chr1
C1orf112	55732	Chromosome 1 open reading frame 112	2,03	4,43	chr1
C1QBP	708	Complement component 1, q subcomponent binding protein	2,30	5,06	chr17
C20orf12	55184	Chromosome 20 open reading frame 12	2,05	3,39	chr13
C21orf66	94104	Chromosome 21 open reading frame 66	4,60	3,56	chr21
C6orf111	25957	chromosome 6 open reading frame 111	3,14	3,93	chr6
C6orf166	55122	Chromosome 6 open reading frame 166	2,56	2,31	chr6
C6orf49	29964	Chromosome 6 open reading frame 49	3,34	5,50	chr6
C6orf84	22832	chromosome 6 open reading frame 84	2,27	2,02	chr6
C9orf72	203228	chromosome 9 open reading frame 72	2,90	3,91	chr9
CA2	760	carbonic anhydrase II	2,38	12,39	chr8

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CALML4	91860	calmodulin-like 4	2,34	2,05	chr15
CAMTA1	23261	calmodulin binding transcription activator 1	3,03	2,05	chr1
CAST1	26059	CAZ-associated structural protein	2,17	3,19	chr3
CBR4	84869	carbonic reductase 4	2,28	4,76	chr4
CBX5	23468	Chromobox homolog 5 (HP1 alpha homolog, Drosophila)	2,23	2,76	chr12
CCAR1	55749	Cell division cycle and apoptosis regulator 1	2,07	3,12	chr10
CCDC14	64770	coiled-coil domain containing 14	2,04	2,16	chr3
CDKN1C	1028	Cyclin-dependent kinase inhibitor 1C (p57, Kip2)	3,14	2,83	chr11
CDON	50937	Cdon homolog (mouse)	3,91	6,95	chr11
CENTG2	116987	Centaurin, gamma 2	2,01	2,77	chr2
Cep152	22995	KIAA0912 protein	2,03	3,56	chr15
CEP68	23177	Centrosomal protein 68kDa	2,54	2,49	chr2
CHD1L	9557	Chromodomain helicase DNA binding protein 1-like	2,83	3,07	chr1
CHD7	55636	chromodomain helicase DNA binding protein 7	5,92	5,99	chr8
CHKB /// CPT1B	1120	choline kinase beta /// carnitine palmitoyltransferase 1B (muscle)	3,33	2,45	chr22
CLCN4	1183	Chloride channel 4	2,43	2,66	chrX
CLGN	1047	calmegin	6,29	3,12	chr4
CNNM3	26505	Cyclin M3	2,43	4,25	chr2
CNOT7	29883	CCR4-NOT transcription complex, subunit 7	2,28	2,44	chr1
COL9A1	1297	collagen, type IX, alpha 1	3,10	4,24	chr6
COPG2	26958	Coatomer protein complex, subunit gamma 2	6,24	2,62	chr7
CPXM	56265	carboxypeptidase X (M14 family)	2,40	4,77	chr20
CRLF3	51379	Cytokine receptor-like factor 3	5,71	2,78	chr17
CTNNA2	1496	catenin (cadherin-associated protein), alpha 2	7,17	3,17	chr2
CTTNBP2	83992	Cortactin binding protein 2	2,30	3,52	chr7
CUGBP2	10659	CUG triplet repeat, RNA binding protein 2	3,44	7,20	chr10
CUL1	8454	Cullin 1	2,13	5,56	chr7
CUL3	8452	Cullin 3	3,04	2,10	chr2
CXCR4	7852	chemokine (C-X-C motif) receptor 4	4,95	13,89	chr2
DCX	1641	doublecortex; lissencephaly, X-linked (doublecortin)	3,86	2,51	chrX
DDX17	10521	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17	2,13	3,06	chr22
DKFZp434P055	91531	hypothetical protein DKFZp434P055	2,42	4,60	chr2
DKFZP761M151	54492	hypothetical protein DKFZP761M1511	2,22	2,83	chr5
DLL1	28514	delta-like 1 (Drosophila)	24,34	2,48	chr6

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DNCH2	79659	dynein, cytoplasmic, heavy polypeptide 2	2,28	2,71	chr11
DOCK3	1795	dedicator of cytokinesis 3	2,46	2,22	chr3
DOT1L	84444	DOT1-like, histone H3 methyltransferase (S. cerevisiae)	2,79	2,17	chr19
DSC2	1824	desmocollin 2	4,07	18,30	chr18
DTX4	23220	deltex 4 homolog (Drosophila)	4,18	2,25	chr11
EFHC1	114327	EF-hand domain (C-terminal) containing 1	3,83	2,26	chr6
EFNA5	1946	Ephrin-A5	10,87	3,06	chr5
EFNB3	1949	ephrin-B3	3,08	2,29	chr17
EIF4G3	8672	Eukaryotic translation initiation factor 4 gamma, 3	2,64	2,36	chr1
EIF5	1983	eukaryotic translation initiation factor 5	2,08	2,34	chr14
ELAVL1	1994	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 1 (Hu antigen R)	3,31	2,03	chr19
EMID2	136227	EMI domain containing 2	2,55	5,51	chr7
ENO3	2027	enolase 3 (beta, muscle)	3,30	3,56	chr17
ENOSF1	55556	enolase superfamily member 1	2,13	2,85	chr18
ENPP2	5168	ectonucleotide pyrophosphatase/phosphodiesterase 2 (autotaxin)	2,43	3,22	chr8
EP400	57634	E1A binding protein p400	2,38	2,39	chr12
EPB41	2035	Erythrocyte membrane protein band 4.1 (elliptocytosis 1, RH-linked)	2,55	8,93	chr1
EPB41L5	57669	erythrocyte membrane protein band 4.1 like 5	4,25	9,76	chr2
EPHA7	2045	EPH receptor A7	7,42	5,60	chr6
ESRRG	2104	estrogen-related receptor gamma	2,58	2,43	chr1
EWSR1	2130	Ewing sarcoma breakpoint region 1	3,64	2,96	chr22
FABP7	2173	fatty acid binding protein 7, brain	7,66	12,13	chr6
FAM64A	54478	Family with sequence similarity 64, member A	2,03	11,88	chr17
FAM7A2	89839	Family with sequence similarity 7, member A2	2,31	2,05	(vide)
FIGN	55137	Fidgetin	4,91	3,25	chr2
FILIP1	27145	filamin A interacting protein 1	3,28	6,89	chr6
FLJ10154	55082	Hypothetical protein FLJ10154	4,51	2,39	chr13
FLJ10213	55096	hypothetical protein FLJ10213	2,20	2,62	chr3
FLJ13089	80018	hypothetical protein FLJ13089	2,41	2,14	chr12
FLJ21865	64772	endo-beta-N-acetylglucosaminidase	2,32	2,23	chr17
FLJ23342	79684	Hypothetical protein FLJ23342	2,60	3,02	chr11
FLJ25076	134111	similar to CG4502-PA	2,40	4,90	chr5
FLJ25967	440823	hypothetical gene supported by AK098833	2,71	27,57	chr22
FLJ34208	401106	Hypothetical gene supported by AK091527	2,15	2,22	chr3

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FNBP1L	54874	Formin binding protein 1-like	2,21	4,18	chr1
FUBP1	8880	Far upstream element (FUSE) binding protein 1	2,47	3,27	chr1
FXYD6	53826	FXYD domain containing ion transport regulator 6	2,91	9,99	chr11
FZD3	7976	frizzled homolog 3 (Drosophila)	3,20	11,16	chr8
GGA2	23062	golgi associated, gamma adaptin ear containing, ARF binding protein 2	2,26	5,26	chr16
GKAP1	80318	G kinase anchoring protein 1	3,06	3,42	chr9
GLCCI1	113263	glucocorticoid induced transcript 1	2,40	3,81	chr7
GNAS	2778	GNAS complex locus	2,01	6,61	chr20
GPC3	2719	glypican 3	9,11	4,73	chrX
GPR23	2846	G protein-coupled receptor 23	2,36	3,28	chrX
GREB1	9687	GREB1 protein	4,39	2,61	chr2
GRHL1	29841	grainyhead-like 1 (Drosophila)	2,15	3,76	chr2
H1F0	3005	H1 histone family, member 0	3,22	2,54	chr22
H1FX	8971	H1 histone family, member X	2,56	2,50	chr3
H2AFV	94239	H2A histone family, member V	2,99	2,01	chr7
HIC2	23119	hypermethylated in cancer 2	2,01	7,88	chr22
HNRPA0	10949	Heterogeneous nuclear ribonucleoprotein A0	2,32	2,65	chr5
HNRPA1	3178	heterogeneous nuclear ribonucleoprotein A1	2,02	4,63	chr12
HNRPA3	220988	heterogeneous nuclear ribonucleoprotein A3	2,37	3,44	chr2
HNRPC	3183	heterogeneous nuclear ribonucleoprotein C (C1/C2)	2,87	2,84	chr14
HNRPD	3184	Heterogeneous nuclear ribonucleoprotein D (AU-rich element RNA binding protein 1, 3	2,64	5,95	chr4
HRB2	11103	HIV-1 rev binding protein 2	2,13	2,28	chr12
HS6ST2	90161	heparan sulfate 6-O-sulfotransferase 2	3,89	5,56	chrX
HSPC065	29070	HSPC065 protein	2,05	2,38	chr16
HUNK	30811	hormonally upregulated Neu-associated kinase	2,65	4,91	chr21
IMMP1L	196294	IMP1 inner mitochondrial membrane peptidase-like (S. cerevisiae)	2,15	2,58	chr11
ING3	54556	inhibitor of growth family, member 3	2,11	2,98	chr7
IPO9	55705	Importin 9	2,55	2,28	chr1
IRS4	8471	Insulin receptor substrate 4	7,48	10,72	chrX
KIAA0582	23177	KIAA0582	2,21	3,47	chr2
KIAA0841	23354	KIAA0841	3,12	2,08	chr19
KIAA1524	57650	KIAA1524	2,62	4,73	chr3
KIAA1545	57666	KIAA1545 protein	2,26	2,81	chr12
KIAA1909	153478	KIAA1909 protein	2,27	6,79	chr5

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KIF5C	3800	Kinesin family member 5C	2,34	147,77	chr2
LAMA1	284217	laminin, alpha 1	2,36	21,06	chr18
LASS6	253782	LAG1 longevity assurance homolog 6 (S. cerevisiae)	2,60	3,09	chr2
LOC115648	115648	similar to hypothetical protein FLJ13659	3,51	3,98	chr19
LOC115648 /// L	115648	similar to hypothetical protein FLJ13659 /// hypothetical protein LOC148203 /// zinc fin	2,01	4,02	chr19
LOC132241	132241	hypothetical protein LOC132241	2,86	2,10	chr3
LOC145786	145786	hypothetical protein LOC145786	72,07	6,72	chr15
LOC153561	153561	Hypothetical protein LOC153561	4,43	11,34	chr5
LOC283481	283481	hypothetical protein LOC283481	2,87	2,60	chr13
LOC388889 /// F	388889	Hypothetical LOC388889 /// Hypothetical protein LOC150271	3,20	3,63	chr22
LOC389295	389295	Hypothetical protein LOC153561	8,12	5,02	chr5
LOC440282	440282	Hypothetical protein LOC145783	3,62	2,44	chr15
LOC440996	440996	Hypothetical gene supported by BC053580	3,68	2,45	chr5
LOC441241 /// L	441241	chaperonin containing TCP1, subunit 6A (zeta 1)-like /// chaperonin containing TCP1,	2,57	2,31	chr7
LOC641522	641522	ADP-ribosylation factor-like 17 pseudogene 1	2,01	3,38	chr17
LOC94431	94431	similar to RNA polymerase I transcription factor RRN3	2,77	2,23	chr16
LPHN3	23284	latrophilin 3	6,67	7,21	chr4
MAP3K1	4214	Mitogen-activated protein kinase kinase kinase 1	2,42	3,76	chr5
MDC1	9656	mediator of DNA damage checkpoint 1	2,30	3,50	chr6
MDM4	4194	Mdm4, transformed 3T3 cell double minute 4, p53 binding protein (mouse)	2,66	2,37	chr1
MED6	10001	mediator of RNA polymerase II transcription, subunit 6 homolog (yeast)	2,15	2,26	chr14
METAP2	10988	Methionyl aminopeptidase 2	2,94	3,16	chr12
MGC22265	349035	(clone CB1) mRNA fragment /// Hypothetical protein MGC22265	2,37	9,90	chr5
MGC33926	130733	hypothetical protein MGC33926	3,27	3,41	chr2
MGEA5	10724	meningioma expressed antigen 5 (hyaluronidase)	3,74	2,18	chr10
MLL3	58508	myeloid/lymphoid or mixed-lineage leukemia 3	2,24	2,37	chr7
MLLT10	8028	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); transloca	2,59	3,11	chr10
MLLT4	4301	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); transloca	4,22	4,34	chr6
MOBKL2B	79817	MOB1, Mps One Binder kinase activator-like 2B (yeast)	2,08	17,80	chr9
MPHOSPH9	10198	M-phase phosphoprotein 9	2,36	2,97	chr12
MRPS6	64968	Mitochondrial ribosomal protein S6	2,84	4,16	chr21
MSH5	4439	mutS homolog 5 (E. coli)	2,77	2,25	chr6
MTERFD2	130916	MTERF domain containing 2	2,25	3,08	chr2
MYEF2	50804	myelin expression factor 2	2,04	3,20	chr15

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NAALAD2	10003	N-acetylated alpha-linked acidic dipeptidase 2	2,66	2,87	chr11
NAG6	64753	hypothetical protein DKFZp434G156	2,52	3,25	chr7
NASP	4678	Nuclear autoantigenic sperm protein (histone-binding)	2,41	33,83	chr1
NBLA04196	64921	Putative protein product of Nbla04196	2,86	2,95	chr7
NCOA5	57727	Nuclear receptor coactivator 5	2,49	2,49	chr20
NEBL	10529	nebulette	4,19	8,36	chr10
NELL2	4753	NEL-like 2 (chicken) /// NEL-like 2 (chicken)	3,91	69,31	chr12
NEO1	4756	neogenin homolog 1 (chicken)	2,57	2,53	chr15
NOL7	51406	Nucleolar protein 7, 27kDa	2,36	2,15	chr6
NOVA1	4857	neuro-oncological ventral antigen 1	2,89	2,65	chr14
NR2C2	7182	Nuclear receptor subfamily 2, group C, member 2	2,19	2,25	chr3
NSUN6	221078	NOL1/NOP2/Sun domain family, member 6	6,89	2,16	chr10
NUDT5	11164	Nudix (nucleoside diphosphate linked moiety X)-type motif 5	2,43	2,44	chr10
NUPL1	9818	Nucleoporin like 1	2,59	2,48	chr13
OTX2	5015	orthodenticle homolog 2 (Drosophila)	2,24	109,06	chr14
OVOS2	144203	ovostatin 2	2,70	14,87	chr12
PABPN1	8106	poly(A) binding protein, nuclear 1	4,03	3,57	chr14
PAN3	255967	PABP1-dependent poly A-specific ribonuclease subunit PAN3	2,12	4,92	chr13
PAQR8	85315	progestin and adipoQ receptor family member VIII	2,76	4,28	chr6
PCBP2	5094	Poly(rC) binding protein 2	2,28	2,19	chr12
PCGF3	10336	Polycomb group ring finger 3	2,57	2,49	chr4
PCM1	5108	Pericentriolar material 1	2,91	2,32	chr8
PDE7A	5150	phosphodiesterase 7A	2,00	7,01	chr8
PGAP1	80055	GPI deacylase	6,04	3,02	chr2
PHF10	55274	PHD finger protein 10	2,31	2,83	chr6
PHF21B	112885	PHD finger protein 21B	2,15	8,54	chr22
PIK3C2A	5286	Phosphoinositide-3-kinase, class 2, alpha polypeptide	2,80	2,33	chr11
PILRB	29990	paired immunoglobin-like type 2 receptor beta	2,31	3,19	chr7
PKP4	8502	Plakophilin 4	2,36	2,54	chr2
PLCL3	23007	phospholipase C-like 3	2,01	8,50	chr3
PLEKHA5	54477	Pleckstrin homology domain containing, family A member 5	2,21	8,88	chr12
PMS2L1 /// PMS2	5379	postmeiotic segregation increased 2-like 1 /// postmeiotic segregation increased 2-like	2,13	2,16	chr7
PPM1L	151742	Protein phosphatase 1 (formerly 2C)-like	2,71	3,64	chr3
PPOX	5498	protoporphyrinogen oxidase	3,33	2,60	chr1

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Table S7 : Genes overexpressed in NPC compared to hES and down-regulated in MPC compared to hES (FC>2 ; α<0.05)

Gene Symbol	Entrez Gene	Gene Title	NPC_up	MPC_down	Chromosome Number(Avadis)
PPP3CA	5530	Protein phosphatase 3 (formerly 2B), catalytic subunit, alpha isoform (calcineurin A alp	2,06	2,69	chr4
PRKAA2	5563	Protein kinase, AMP-activated, alpha 2 catalytic subunit	2,74	3,58	chr1
PRO2852	114224	hypothetical protein PRO2852	2,03	2,69	chr9
PRPF40A	55660	PRP40 pre-mRNA processing factor 40 homolog A (yeast)	2,56	2,22	chr2
PRTG	283659	Protogenin homolog (Gallus gallus)	38,57	9,91	chr15
PSME4	23198	Proteasome (prosome, macropain) activator subunit 4	2,16	2,83	chr2
PTBP2	58155	Polypyrimidine tract binding protein 2	2,41	4,28	chr1
PTPN5	84867	protein tyrosine phosphatase, non-receptor type 5 (striatum-enriched)	3,51	5,93	chr11
PTPRD	5789	Protein tyrosine phosphatase, receptor type, D	4,30	15,44	chr9
PTPRG	5793	Protein tyrosine phosphatase, receptor type, G	2,25	2,86	chr3
PUM2	23369	Pumilio homolog 2 (Drosophila)	3,87	2,88	chr2
PUNC	9543	putative neuronal cell adhesion molecule	4,01	9,73	chr15
RAB6B	51560	RAB6B, member RAS oncogene family	2,51	2,41	chr3
RAF1	5894	V-raf-1 murine leukemia viral oncogene homolog 1	2,34	2,51	chr3
RBBP6	5930	retinoblastoma binding protein 6	2,47	3,00	chr16
RBM25	58517	RNA binding motif protein 25	2,10	3,43	chr14
RBM6	10180	RNA binding motif protein 6	3,28	3,27	chr3
RCBTB2	1102	regulator of chromosome condensation (RCC1) and BTB (POZ) domain containing pro	2,95	2,16	chr13
RERE	473	Arginine-glutamic acid dipeptide (RE) repeats	2,11	2,68	chr1
RFC3	5983	Replication factor C (activator 1) 3, 38kDa	2,37	5,20	chr13
RFX3	5991	Regulatory factor X, 3 (influences HLA class II expression)	2,83	2,83	chr9
RNF130	55819	Ring finger protein 130	3,33	3,52	chr5
RNF175	285533	ring finger protein 175	3,51	7,07	chr4
RPS6KA5	9252	ribosomal protein S6 kinase, 90kDa, polypeptide 5	2,11	2,03	chr14
RTN1	6252	reticulon 1	6,98	3,45	chr14
SEMA3F	6405	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphori	2,29	8,60	chr3
SENP6	26054	SUMO1/sentrin specific peptidase 6	2,82	3,15	chr6
SFPQ	6421	Splicing factor proline/glutamine-rich (polypyrimidine tract binding protein associated)	3,94	3,61	chr1
SFRP2	6423	secreted frizzled-related protein 2	5,36	113,98	chr4
SFRS1	6426	Splicing factor, arginine/serine-rich 1 (splicing factor 2, alternate splicing factor)	2,65	4,65	chr17
SFRS4	6429	Splicing factor, arginine/serine-rich 4	2,26	2,19	chr1
SILV	6490	silver homolog (mouse)	3,28	30,56	chr12
SIPA1L2	57568	signal-induced proliferation-associated 1 like 2	3,19	3,70	chr1
SLC1A2	6506	solute carrier family 1 (glial high affinity glutamate transporter), member 2	3,01	2,30	chr11

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SLC25A37	51312	solute carrier family 25, member 37	3,10	2,15	chr8
SLC35F1	222553	solute carrier family 35, member F1	2,10	9,40	chr6
SLITRK5	26050	SLIT and NTRK-like family, member 5	3,43	2,12	chr13
SMARCC1	6599	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamil	3,05	7,65	chr3
SMARCE1	6605	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamil	2,05	2,85	chr17
SMU1	55234	Smu-1 suppressor of mec-8 and unc-52 homolog (C. elegans)	2,41	2,44	chr9
SNCA	6622	synuclein, alpha (non A4 component of amyloid precursor) /// synuclein, alpha (non A4	2,70	3,47	chr4
SNRPA1	6627	Small nuclear ribonucleoprotein polypeptide A'	2,47	4,71	chr15
SOX11	6664	SRY (sex determining region Y)-box 11	8,85	3,41	chr2
SOX3	6658	SRY (sex determining region Y)-box 3	3,38	5,34	chrX
SP8	221833	Sp8 transcription factor	16,95	3,32	chr7
SPON1	10418	spondin 1, extracellular matrix protein	9,34	2,51	chr11
SPSB4	92369	splA/ryanodine receptor domain and SOCS box containing 4	2,16	3,46	chr3
SREBF1	6720	Sterol regulatory element binding transcription factor 1	2,06	2,48	chr17
SSBP2	23635	Single-stranded DNA binding protein 2	7,89	2,52	chr5
SUV420H1	51111	Suppressor of variegation 4-20 homolog 1 (Drosophila)	2,41	4,63	chr11
SYT17	51760	Synaptotagmin XVII	3,76	3,45	chr16
TAF15	8148	TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 68kDa	2,84	3,92	chr17
TARDBP	23435	TAR DNA binding protein /// TAR DNA binding protein	2,19	2,33	chr1
TBC1D8	11138	TBC1 domain family, member 8 (with GRAM domain)	2,20	5,48	chr2
TCF12	6938	Transcription factor 12 (HTF4, helix-loop-helix transcription factors 4)	2,55	2,38	chr15
TEX10	54881	Testis expressed sequence 10	2,17	3,46	chr9
TFDP2	7029	Transcription factor Dp-2 (E2F dimerization partner 2)	2,21	9,05	chr3
TGFBR3	7049	transforming growth factor, beta receptor III (betaglycan, 300kDa)	5,34	2,04	chr1
TIA1	7072	TIA1 cytotoxic granule-associated RNA binding protein	2,69	2,51	chr2
TIAM1	7074	T-cell lymphoma invasion and metastasis 1	3,51	2,46	chr21
TIGA1	114915	TIGA1	2,74	2,55	chr5
TMCC1	23023	transmembrane and coiled-coil domain family 1	2,08	2,61	chr3
TMEM118	84900	Transmembrane protein 118	3,17	5,24	chr12
TMSL8	11013	thymosin-like 8	2,67	6,34	chrX
TRA2A	29896	Transformer-2 alpha	4,88	2,33	chr7
TRIB2	28951	tribbles homolog 2 (Drosophila)	2,63	3,03	chr2
TRIM45	80263	Tripartite motif-containing 45	2,69	5,32	chr1
TSPAN18	90139	tetraspanin 18	3,72	2,29	chr11

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Table S7 : Genes overexpressed in NPC compared to hES and down-regulated in MPC compared to hES (FC>2 ; α<0.05)

Gene Symbol	Entrez Gene	Gene Title	NPC_up	MPC_down	Chromosome Number(Avadis)
U2AF1	7307	U2(RNU2) small nuclear RNA auxiliary factor 1	2,01	3,61	chr15
UBE2I	7329	Ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast)	2,47	2,80	chr16
UBE3B	89910	ubiquitin protein ligase E3B	2,05	2,10	chr12
UBE3C	9690	Ubiquitin protein ligase E3C	2,38	3,73	chr7
USP13	8975	Ubiquitin specific peptidase 13 (isopeptidase T-3)	3,56	3,14	chr5
USP34	9736	Ubiquitin specific peptidase 34	2,80	2,22	chr2
VprBP	9730	Vpr-binding protein	2,07	2,21	chr3
WDR27	253769	CDNA FLJ46815 fis, clone TRACH3036897 /// WD repeat domain 27	2,37	2,95	chr6
WDR33	55339	WD repeat domain 33	2,76	3,29	chr2
WDR42A	50717	WD repeat domain 42A	2,05	5,14	chr1
WHSC1	7468	Wolf-Hirschhorn syndrome candidate 1	5,42	2,16	chr4
WHSC1L1	54904	Wolf-Hirschhorn syndrome candidate 1-like 1	2,23	2,17	chr8
XPR1	9213	Xenotropic and polytropic retrovirus receptor	2,32	2,62	chr1
YPEL1	29799	yippee-like 1 (Drosophila)	2,76	2,30	chr22
ZCCHC11	23318	Zinc finger, CCHC domain containing 11	3,81	2,69	chr1
ZFAND3	60685	Zinc finger, AN1-type domain 3	2,77	2,19	chr6
ZNF124	7678	zinc finger protein 124 (HZF-16)	3,45	5,80	chr1
ZNF131	7690	Zinc finger protein 131 (clone pHZ-10)	2,04	3,80	chr5
ZNF141	7700	Zinc finger protein 141 (clone pHZ-44)	2,37	2,58	chr4
ZNF22	7570	zinc finger protein 22 (KOX 15)	2,16	2,79	chr10
ZNF302	55900	zinc finger protein 302	2,20	2,77	chr19
ZNF395	55893	zinc finger protein 395	2,17	2,17	chr8
ZNF44	51710	Zinc finger protein 44 (KOX 7)	3,06	2,11	chr19
ZNF447	65982	zinc finger protein 447	3,12	2,54	chr19
ZNF518	9849	Zinc finger protein 518	2,33	6,44	(vide)
ZNF519	162655	zinc finger protein 519	4,03	8,99	chr18
ZNF544	27300	Zinc finger protein 544	3,33	5,14	chr19
ZNF606	80095	zinc finger protein 606	2,25	2,32	chr19
ZNF608	57507	zinc finger protein 608	2,55	3,16	chr5
ZNF708	7562	Zinc finger protein 708 (KOX8)	2,32	4,08	chr19
ZNF84	7637	Zinc finger protein 84 (HPF2)	4,42	2,88	chr12
ZNF91	7644	Zinc finger protein 91 (HPF7, HTF10)	2,89	3,68	chr19
ZNRF1	84937	zinc and ring finger 1	2,10	2,07	chr16
ZRF1	27000	Zuotin related factor 1	2,93	3,84	chr7

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Table S8 : Genes up-regulated in MPC compared to hES and not modulated in NPC compared to hES (FC>2 ; α<0.05)

Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
sept-06	23157 /// 84656	septin 6 /// cytokine-like nuclear factor n-pac	2,66	chrX
39326	989	Septin 7	2,10	chr7
40787	55752	Septin 11	73,88	chr4
AADACL1	57552	arylacetamide deacetylase-like 1	4,26	chr3
ABHD2	11057	abhydrolase domain containing 2	2,32	chr15
ABI1	10006	abl-interactor 1	2,24	chr10
ABI3BP	25890	ABI gene family, member 3 (NESH) binding protein	5,82	chr3
ABLIM3	22885	actin binding LIM protein family, member 3	2,00	chr5
ACBD3	64746	acyl-Coenzyme A binding domain containing 3	2,33	chr1
ACP2	53	acid phosphatase 2, lysosomal	2,32	chr11
ACSL4	2182	acyl-CoA synthetase long-chain family member 4	3,23	chrX
ACSS2	55902	acyl-CoA synthetase short-chain family member 2	2,59	chr20
ACTG2	72	actin, gamma 2, smooth muscle, enteric	92,67	chr2
ACTN1	87	actinin, alpha 1	5,49	chr14
ACTN4	81	actinin, alpha 4	3,50	chr19
ACTR10	55860	actin-related protein 10 homolog (S. cerevisiae)	2,52	chr14
ACTR1A	10121	ARP1 actin-related protein 1 homolog A, centractin alpha (yeast)	2,60	chr10
ACTR2	10097	ARP2 actin-related protein 2 homolog (yeast)	4,01	chr2
ACTR3	10096	ARP3 actin-related protein 3 homolog (yeast)	3,56	chr2
ACVR1	90	activin A receptor, type I	2,11	chr2
ADA	100	adenosine deaminase	2,90	chr20
ADAM10	102	ADAM metallopeptidase domain 10	2,14	chr15
ADAM9	8754	ADAM metallopeptidase domain 9 (meltrin gamma)	18,84	chr8
ADAMTS5	11096	ADAM metallopeptidase with thrombospondin type 1 motif, 5 (aggrecanase-2)	9,73	(vide)
ADCY9	115	adenylate cyclase 9	2,59	chr16
ADD1	118	adducin 1 (alpha)	6,50	chr4
ADK	132	adenosine kinase	4,23	chr10
AEBP1	165	AE binding protein 1	3,30	chr7
AFAP	60312	actin filament associated protein	6,64	chr4
AGA	175	aspartylglucosaminidase	3,03	chr4
AGTR1	185	angiotensin II receptor, type 1	6,52	chr3
AHR	196	aryl hydrocarbon receptor	8,35	chr7
AK1	203	adenylate kinase 1	5,98	chr9
AK5	26289	adenylate kinase 5	4,34	chr1

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
AKAP12	9590	A kinase (PRKA) anchor protein (gravin) 12	3,01	chr6
AKAP2	11217 /// 445815	A kinase (PRKA) anchor protein 2 /// PALM2-AKAP2 protein	2,80	chr9
AKT1	207	v-akt murine thymoma viral oncogene homolog 1	3,57	chr14
ALDH1L2	160428	aldehyde dehydrogenase 1 family, member L2	15,17	chr12
ALG14	199857	asparagine-linked glycosylation 14 homolog (yeast)	2,56	chr1
ALS2	57679	amyotrophic lateral sclerosis 2 (juvenile)	2,48	chr2
ALS2CR3	66008	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 3	4,36	chr2
ALS2CR7	65061	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 7	5,16	chr2
AMFR	267	autocrine motility factor receptor	3,63	chr16
AMPD2	271	adenosine monophosphate deaminase 2 (isoform L)	2,02	chr1
ANAPC13	25847	anaphase promoting complex subunit 13	2,48	chr3
ANKH	56172	ankylosis, progressive homolog (mouse)	2,33	chr5
ANKRA2	57763	ankyrin repeat, family A (RFXANK-like), 2	2,58	chr5
ANKRD1	27063	ankyrin repeat domain 1 (cardiac muscle)	9,51	chr10
ANKRD25	25959	ankyrin repeat domain 25	2,08	chr19
ANKRD28	23243	ankyrin repeat domain 28	6,26	chr3
ANKRD44	91526	Ankyrin repeat domain 44	4,98	chr2
ANTXR1	84168	anthrax toxin receptor 1	4,37	chr2
ANXA1	301	annexin A1	50,64	chr9
ANXA11	311	annexin A11	2,15	chr10
ANXA2	302	annexin A2	7,32	chr9
ANXA2P1	303	annexin A2 pseudogene 1	3,65	chr4
ANXA2P2	304	annexin A2 pseudogene 2	7,03	chr9
ANXA5	308	annexin A5	2,64	chr4
ANXA6	309	annexin A6	7,19	chr5
AOF1	221656	amine oxidase (flavin containing) domain 1	2,47	chr6
AP1M1	8907	adaptor-related protein complex 1, mu 1 subunit	2,57	chr19
AP1S1	1174	adaptor-related protein complex 1, sigma 1 subunit	2,71	chr7
AP2M1	1173	adaptor-related protein complex 2, mu 1 subunit	2,55	chr3
APOBEC3C	27350	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3C	3,18	chr22
ARAF	369	v-raf murine sarcoma 3611 viral oncogene homolog	2,20	chrX
ARF4L	379	ADP-ribosylation factor 4-like	2,70	chr17
ARFGAP1	55738	ADP-ribosylation factor GTPase activating protein 1	2,63	chr20
ARFGAP3	26286	ADP-ribosylation factor GTPase activating protein 3	4,76	chr22
ARHGAP1	392	Rho GTPase activating protein 1	2,35	chr11

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ARHGAP18	93663	Rho GTPase activating protein 18	4,52	chr6
ARHGAP23	57636	Rho GTPase activating protein 23	4,45	chr17
ARHGDIA	396	Rho GDP dissociation inhibitor (GDI) alpha /// Rho GDP dissociation inhibitor (GDI) alpha	3,69	chr17_random
ARHGEF12	23365	Rho guanine nucleotide exchange factor (GEF) 12	3,21	chr11
ARL1	400	ADP-ribosylation factor-like 1	2,71	chr12
ARL2BP	23568	ADP-ribosylation factor-like 2 binding protein	3,01	chr16
ARPC1B	10095	actin related protein 2/3 complex, subunit 1B, 41kDa	2,24	chr7
ARPC2	10109	actin related protein 2/3 complex, subunit 2, 34kDa	2,13	chr2
ARPC5	10092	actin related protein 2/3 complex, subunit 5, 16kDa	3,48	chr1
ARSB	411	arylsulfatase B	3,20	chr5
ARSJ	79642	arylsulfatase J	70,99	chr4
ARTS-1	51752	type 1 tumor necrosis factor receptor shedding aminopeptidase regulator	3,05	chr5
ASAH1	427	N-acylsphingosine amidohydrolase (acid ceramidase) 1	2,03	chr8
ASAM	79827	Adipocyte-specific adhesion molecule	5,27	chr11
ASB8	140461	ankyrin repeat and SOCS box-containing 8	4,22	chr12
ATG4A	115201	ATG4 autophagy related 4 homolog A (S. cerevisiae)	3,34	chrX
ATG7	10533	ATG7 autophagy related 7 homolog (S. cerevisiae)	2,99	chr3
ATM	472	ataxia telangiectasia mutated (includes complementation groups A, C and D)	2,49	chr11
ATP10A	57194	ATPase, Class V, type 10A	2,95	chr15
ATP11B	23200	ATPase, Class VI, type 11B	4,34	chr3
ATP13A3	79572	ATPase type 13A3	4,08	chr3
ATP2A2	488	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	2,04	chr12
ATP5E	514	ATP synthase, H+ transporting, mitochondrial F1 complex, epsilon subunit	2,17	chr20
ATP6AP2	10159	ATPase, H+ transporting, lysosomal accessory protein 2	2,17	chrX
ATP6V0D1	9114	ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d isoform 1	2,09	chr16
ATP6V0E	8992	ATPase, H+ transporting, lysosomal 9kDa, V0 subunit e	3,70	chr5
ATP8B1	5205	ATPase, Class I, type 8B, member 1	24,44	chr18
ATXN1	6310	ataxin 1	10,66	chr6
AVO3	253260	TORC2-specific protein AVO3	2,26	chr5
AZI2	64343	5-azacytidine induced 2	3,19	chr3
B2M	567	beta-2-microglobulin	7,86	chr15
B4GALT1	2683	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1	2,38	chr9
bA16L21.2.1	548645	DnaJ-like protein	2,04	chr9
BACE2	25825	beta-site APP-cleaving enzyme 2	4,07	chr21
BACH1	571	BTB and CNC homology 1, basic leucine zipper transcription factor 1	4,61	chr21

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BAG3	9531	BCL2-associated athanogene 3	4,88	chr10
BAZ1A	11177	bromodomain adjacent to zinc finger domain, 1A	2,35	chr14
BBX	56987	Bobby sox homolog (Drosophila)	2,15	chr3
BC002942	91289	hypothetical protein BC002942	4,19	chr22
BCAP29	55973	B-cell receptor-associated protein 29	3,69	chr7
BCAT1	586	branched chain aminotransferase 1, cytosolic	2,15	chr12
BCL10	8915	B-cell CLL/lymphoma 10	2,12	chr1
BCL2L13	23786	BCL2-like 13 (apoptosis facilitator)	2,47	chr22
BCL2L2	599	BCL2-like 2	2,53	chr14
BCL3	602	B-cell CLL/lymphoma 3	3,22	chr19
BCL6	604	B-cell CLL/lymphoma 6 (zinc finger protein 51) /// B-cell CLL/lymphoma 6 (zinc finger protein 51)	4,77	chr3
BDKRB1	623	bradykinin receptor B1	4,87	chr14
BDKRB2	624	bradykinin receptor B2	2,23	chr14
BDNF	627	brain-derived neurotrophic factor	25,72	chr11
BET1L	51272	blocked early in transport 1 homolog (S. cerevisiae)-like	2,02	chr11
BGN	633	biglycan	23,88	chrX
BGN	10194 /// 633	biglycan /// serologically defined colon cancer antigen 33	39,55	chrX
BHLHB2	8553	basic helix-loop-helix domain containing, class B, 2	6,35	chr3
BHLHB3	79365	basic helix-loop-helix domain containing, class B, 3	4,59	chr12
BIC	114614	BIC transcript	2,42	chr21
BICD2	23299	bicaudal D homolog 2 (Drosophila)	3,05	chr9
BIRC2	329	baculoviral IAP repeat-containing 2	2,55	chr11
BIRC4	331	baculoviral IAP repeat-containing 4	2,01	chrX
BIVM	54841	basic, immunoglobulin-like variable motif containing	2,86	chr13
Bles03	83638	basophilic leukemia expressed protein BLES03	2,16	chr11
BLZF1	8548	basic leucine zipper nuclear factor 1 (JEM-1)	3,21	chr1
BMP1	649	bone morphogenetic protein 1	8,18	chr8
BNIP2	663	BCL2/adenovirus E1B 19kDa interacting protein 2	2,71	chr15
BPGM	669	2,3-bisphosphoglycerate mutase /// 2,3-bisphosphoglycerate mutase	3,32	chr7
BPNT1	10380	3'(2'), 5'-bisphosphate nucleotidase 1	2,40	chr1
BRP44L	51660	brain protein 44-like	2,70	chr6
BTBD6	90135	BTB (POZ) domain containing 6	4,67	chr14
BTN2A1	11120	butyrophilin, subfamily 2, member A1	2,04	chr6
BTN3A1	11119	butyrophilin, subfamily 3, member A1	2,23	chr6
BTN3A2	11118	butyrophilin, subfamily 3, member A2	3,77	chr6

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
BTN3A3 /// BTN3	10384 /// 11118	butyrophilin, subfamily 3, member A3 /// butyrophilin, subfamily 3, member A2	5,21	chr6
BVES	11149	blood vessel epicardial substance	6,10	chr6
BZRP	706	benzodiazapine receptor (peripheral)	9,01	chr22
C10orf10	11067	chromosome 10 open reading frame 10	9,04	chr10
C10orf88	80007	chromosome 10 open reading frame 88	3,76	chr10
C10orf97	80013	chromosome 10 open reading frame 97	2,62	chr10
C11orf17	56672	chromosome 11 open reading frame 17	2,94	chr11
C11orf24	53838	chromosome 11 open reading frame 24	2,57	chr11
C11orf41	25758	chromosome 11 open reading frame 41	3,95	chr11
C13orf1	57213	chromosome 13 open reading frame 1	2,52	chr13
C13orf12	51371	chromosome 13 open reading frame 12	4,45	chr13
C14orf125	25938	chromosome 14 open reading frame 125	2,98	chr14
C14orf139	79686	chromosome 14 open reading frame 139	16,45	chr14
C14orf149	112849	chromosome 14 open reading frame 149	4,64	chr14
C14orf24	283635	chromosome 14 open reading frame 24	4,17	chr14
C14orf28	122525	chromosome 14 open reading frame 28	4,52	chr14
C14orf34	55673	chromosome 14 open reading frame 34	2,07	chr17
C14orf37	145407	chromosome 14 open reading frame 37	2,65	chr14
C14orf43	91748	chromosome 14 open reading frame 43	2,47	chr14
C14orf44	145483	Chromosome 14 open reading frame 44	2,01	chr14
C14orf45	80127	chromosome 14 open reading frame 45	5,28	chr14
C14orf78	113146	chromosome 14 open reading frame 78	8,90	chr14
C14orf92	9878	chromosome 14 open reading frame 92	2,32	chr4
C16orf30	79652	chromosome 16 open reading frame 30	2,19	chr16
C18orf10	25941	Chromosome 18 open reading frame 10	2,08	chr18
C18orf4	92126	chromosome 18 open reading frame 4	3,23	chr18
C19orf10	56005	chromosome 19 open reading frame 10	4,24	chr19
C1orf119	56900	chromosome 1 open reading frame 119	2,93	chr1
C1orf144	26099	chromosome 1 open reading frame 144	8,89	chr1
C1orf22	80267	chromosome 1 open reading frame 22	6,25	chr1
C1orf24	116496	chromosome 1 open reading frame 24	3,10	chr1
C1orf53	388722	chromosome 1 open reading frame 53	2,25	chr1
C1orf71	163882	chromosome 1 open reading frame 71	3,06	chr1
C1orf78	55194	chromosome 1 open reading frame 78 /// chromosome 1 open reading frame 78	2,33	chr1
C1orf91	56063	chromosome 1 open reading frame 91	2,42	chr1

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C20orf100	84969	chromosome 20 open reading frame 100	2,46	chr20
C20orf117	140710	chromosome 20 open reading frame 117	2,41	chr20
C20orf18	10616	chromosome 20 open reading frame 18	2,16	chr20
C20orf22	26090	chromosome 20 open reading frame 22	2,43	chr20
C20orf29	55317	chromosome 20 open reading frame 29	2,43	chr20
C21orf7	56911	chromosome 21 open reading frame 7	24,00	chr21
C21orf86	257103	Chromosome 21 open reading frame 86	2,11	chr21
C2orf10	91752	chromosome 2 open reading frame 10	4,29	chr2
C2orf17	79137	chromosome 2 open reading frame 17	3,82	chr2
C2orf18	54978	chromosome 2 open reading frame 18	3,27	chr2
C2orf27	29798	Chromosome 2 open reading frame 27	6,46	chr2
C2orf30	27248	chromosome 2 open reading frame 30	3,50	chr2
C2orf32	25927	chromosome 2 open reading frame 32	13,68	chr2
C2orf7	84279	chromosome 2 open reading frame 7	2,50	chr2
C5orf14	79770	chromosome 5 open reading frame 14	2,56	chr5
C5orf3	10827	chromosome 5 open reading frame 3	4,97	chr5
C6orf188	254228	chromosome 6 open reading frame 188	2,10	chr6
C6orf48	50854	chromosome 6 open reading frame 48	2,22	chr6
C6orf65	221336	chromosome 6 open reading frame 65	4,70	chr6
C6orf72	116254	chromosome 6 open reading frame 72	2,34	chr6
C7orf10	79783	chromosome 7 open reading frame 10	3,44	chr7
C7orf25	79020	chromosome 7 open reading frame 25	2,09	chr7
C9orf10	23196	chromosome 9 open reading frame 10	5,77	chr9
C9orf150	286343	chromosome 9 open reading frame 150	6,47	chr9
C9orf19	152007	chromosome 9 open reading frame 19	2,43	chr9
C9orf3	84909	chromosome 9 open reading frame 3	3,37	chr9
C9orf88	64855	chromosome 9 open reading frame 88	6,54	chr9
C9orf89	84270	chromosome 9 open reading frame 89	2,09	chr9
C9orf94	206938	chromosome 9 open reading frame 94	6,26	chr9
C9orf95	54981	chromosome 9 open reading frame 95	3,37	chr9
CA12	771	carbonic anhydrase XII	11,03	chr15
CALCOCO1	57658	calcium binding and coiled-coil domain 1	3,05	chr12
CAMTA2	23125	calmodulin binding transcription activator 2	3,19	chr17
CANT1	124583	calcium activated nucleotidase 1	2,11	chr17
CAP1	10487	CAP, adenylate cyclase-associated protein 1 (yeast)	2,51	chr1

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CAPN7	23473	calpain 7	3,02	chr3
CAPNS1	826	calpain, small subunit 1 /// calpain, small subunit 1	3,94	chr19
CASC4	113201	cancer susceptibility candidate 4	3,50	chr15
CASP4	837	caspase 4, apoptosis-related cysteine peptidase	3,52	chr11
CASP7	840	caspase 7, apoptosis-related cysteine peptidase	3,07	chr10
CASP8	841	caspase 8, apoptosis-related cysteine peptidase	4,36	chr2
CAV1	857	caveolin 1, caveolae protein, 22kDa	27,31	chr7
CAV2	858	caveolin 2	46,79	chr7
CBX4	8535	chromobox homolog 4 (Pc class homolog, Drosophila)	6,13	chr17
CBX6	23466	Chromobox homolog 6	3,65	chr22
CCBE1	147372	collagen and calcium binding EGF domains 1	2,79	chr18
CCDC6	8030	coiled-coil domain containing 6	2,23	chr10
CCDC75	253635	Coiled-coil domain containing 75	2,67	chr2
CCND1	595	cyclin D1	6,46	chr11
CCND3	896	cyclin D3	2,20	chr6
CCPG1	9236	cell cycle progression 1	9,01	chr15
CD109	135228	CD109 antigen (Gov platelet alloantigens)	10,06	chr6
CD151	977	CD151 antigen	6,14	chr11
CD248	57124	CD248 antigen, endosialin	12,50	chr11
CD274	29126	CD274 antigen	40,81	chr9
CD44	960	CD44 antigen (homing function and Indian blood group system)	111,41	chr11
CD58	965	CD58 antigen, (lymphocyte function-associated antigen 3)	2,04	chr1
CD59	966	CD59 antigen p18-20 (antigen identified by monoclonal antibodies 16.3A5, EJ16, EJ30, EL32 and G34	15,10	chr11
CDA08	81533	T-cell immunomodulatory protein	3,36	chr16
CDC27	996	Cell division cycle 27	2,65	chr17
CDC42	998	cell division cycle 42 (GTP binding protein, 25kDa)	2,39	chr1
CDC42BPA	8476	CDC42 binding protein kinase alpha (DMPK-like)	2,33	chr1
CDC42EP5	148170	CDC42 effector protein (Rho GTPase binding) 5	26,82	chr19
CDGAP	57514	Cdc42 GTPase-activating protein	2,48	chr3
CDH13	1012	cadherin 13, H-cadherin (heart)	14,00	chr16
CDKN1A	1026	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	55,11	chr6
CDKN2A	1029	cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)	22,27	chr9
CDKN2B	1030	cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)	45,10	chr9
CDKN2C	1031	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)	6,71	chr1
CEBPD	1052	CCAAT/enhancer binding protein (C/EBP), delta	5,63	chr8

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CEECAM1	51148	cerebral endothelial cell adhesion molecule 1	6,20	chr9
CES2	8824	carboxylesterase 2 (intestine, liver)	2,29	chr16
CFH	3075	complement factor H	6,49	chr1
CFH	3075 /// 3078	complement factor H /// complement factor H-related 1	10,31	chr1
CFL1	1072	cofilin 1 (non-muscle)	2,23	chr1
CFL2	1073	cofilin 2 (muscle)	13,08	chr14
CFLAR	8837	CASP8 and FADD-like apoptosis regulator	3,61	chr2
CGI-116	51019	CGI-116 protein	3,64	chr12
CHD3	1107	chromodomain helicase DNA binding protein 3	3,27	chr17
CHID1	66005	Chitinase domain containing 1	3,05	chr11
CHM	1121	choroideremia (Rab escort protein 1)	2,13	chrX
CHMP1B	57132	chromatin modifying protein 1B	2,19	chr18
CHMP5	51510	chromatin modifying protein 5	2,35	chr9
CHPF	79586	chondroitin polymerizing factor	2,40	chr2
CHST3	9469	carbohydrate (chondroitin 6) sulfotransferase 3	3,32	chr10
CIB1	10519	calcium and integrin binding 1 (calmyrin)	3,77	chr15
CITED2	10370	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2	3,77	chr6
CKAP4	10970	cytoskeleton-associated protein 4	4,50	chr12
CKIP-1	51177	CK2 interacting protein 1; HQ0024c protein	2,67	chr1
CLCN3	1182	chloride channel 3	2,07	chr4
CLDN1	9076	claudin 1	10,12	chr3
CLN5	1203	ceroid-lipofuscinosis, neuronal 5	4,59	chr13
CLSTN2	64084	calsyntenin 2	2,86	chr3
CLTB	1212	clathrin, light polypeptide (Lcb) /// clathrin, light polypeptide (Lcb)	2,22	chr5
CNN1	1264	calponin 1, basic, smooth muscle	12,00	chr19
CNN2	1265	calponin 2	3,51	chr19
CNN3	1266	calponin 3, acidic	2,21	chr1
CNTNAP1	8506	contactin associated protein 1	3,78	chr17
COBLL1	22837	COBL-like 1	3,42	chr2
COG1	9382	component of oligomeric golgi complex 1	2,27	chr17
COG5	10466	component of oligomeric golgi complex 5	3,88	chr7
COG6	57511	component of oligomeric golgi complex 6	4,62	chr13
COL25A1	84570	collagen, type XXV, alpha 1	2,08	chr4
COL4A1	1282	collagen, type IV, alpha 1	18,41	chr13
COL6A1	1291	collagen, type VI, alpha 1	3,20	chr21

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COL6A2	1292	collagen, type VI, alpha 2	51,34	chr21
COL8A1	1295	Collagen, type VIII, alpha 1	291,36	chr3
COMMD8	54951	COMM domain containing 8	3,62	chr4
COMT	1312	catechol-O-methyltransferase	5,97	chr22
COPA	1314	coatomer protein complex, subunit alpha	2,51	chr1
COPB	1315	coatomer protein complex, subunit beta	3,08	chr11
COPB2	9276	coatomer protein complex, subunit beta 2 (beta prime)	2,27	chr3
COPE	11316	coatomer protein complex, subunit epsilon	2,19	chr19
COPG	22820	coatomer protein complex, subunit gamma	2,74	chr3
COPZ1	22818	coatomer protein complex, subunit zeta 1	2,20	chr12
COPZ2	51226	coatomer protein complex, subunit zeta 2	20,86	chr17
COTL1	23406	coactosin-like 1 (Dictyostelium)	2,66	chr16
CPA4	51200	carboxypeptidase A4	9,29	chr7
CPEB2	132864	cytoplasmic polyadenylation element binding protein 2	8,67	chr4
CPEB4	80315	cytoplasmic polyadenylation element binding protein 4	2,96	chr5
CRAT	1384	carnitine acetyltransferase	3,90	chr9
CREB3	10488	cAMP responsive element binding protein 3	4,52	chr9
CREB3L1	90993	cAMP responsive element binding protein 3-like 1	13,03	chr11
CREB3L2	64764	cAMP responsive element binding protein 3-like 2	3,27	chr7
CRI1	23741	CREBBP/EP300 inhibitor 1 /// CREBBP/EP300 inhibitor 1	2,73	chr15
CRIM1	51232	cysteine rich transmembrane BMP regulator 1 (chordin-like)	22,12	chr2
CRYL1	51084	crystallin, lambda 1	2,12	chr13
CSGlcA-T	54480	chondroitin sulfate glucuronyltransferase	7,26	chr7
CSNK1D	1453	casein kinase 1, delta	2,07	chr17
CSNK1G1	53944	casein kinase 1, gamma 1	2,41	chr15
CSPG4	1464	Chondroitin sulfate proteoglycan 4 (melanoma-associated)	13,86	chr15
CSRP1	1465	cysteine and glycine-rich protein 1	14,42	chr1
CSS3	337876	chondroitin sulfate synthase 3	24,41	chr5
CST3	1471	cystatin C (amyloid angiopathy and cerebral hemorrhage)	6,45	chr20
CTBS	1486	chitobiase, di-N-acetyl-	10,27	chr1
CTGF	1490	connective tissue growth factor	20,66	chr6
CTSB	1508	cathepsin B	17,12	chr8
CUEDC2	79004	CUE domain containing 2	2,04	chr10
CUL4B	8450	cullin 4B	2,80	chr10
CUL5	8065	cullin 5	2,16	chr11

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CXCL1	2919	chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)	3,08	chr4
CXorf6	10046	chromosome X open reading frame 6	2,22	chrX
CXX1	8933	CAAX box 1	6,79	chrX
CYB5R1	51706	cytochrome b5 reductase 1	5,37	chr1
CYB5R3	1727	cytochrome b5 reductase 3	4,06	chr22
CYBASC3	220002	cytochrome b, ascorbate dependent 3	3,34	chr11
CYBRD1	79901	cytochrome b reductase 1	31,09	chr2
CYLD	1540	cylindromatosis (turban tumor syndrome)	4,52	chr16
CYP1B1	1545	cytochrome P450, family 1, subfamily B, polypeptide 1	8,47	chr2
CYP2U1	113612	cytochrome P450, family 2, subfamily U, polypeptide 1	3,83	chr4
CYR61	3491	cysteine-rich, angiogenic inducer, 61	11,63	chr1
DAAM2	23500	dishevelled associated activator of morphogenesis 2	4,30	chr6
DAP	1611	death-associated protein	6,45	chr5
DAZAP2	9802	DAZ associated protein 2	4,86	chr12
DAZAP2	401029 /// 9802	DAZ associated protein 2 /// similar to DAZ-associated protein 2 (Deleted in azoospermia-associated p	3,35	chr12
DBNL	28988	drebrin-like	2,02	chr7
DCBLD1	285761	discoidin, CUB and LCCL domain containing 1	6,28	chr6
DCTD	1635	dCMP deaminase	2,57	chr4
DDAH1	23576	dimethylarginine dimethylaminohydrolase 1	3,91	chr1
DDIT3	1649	DNA-damage-inducible transcript 3	3,99	chr12
DECR1	1666	2,4-dienoyl CoA reductase 1, mitochondrial	2,43	chr8
DEGS1	8560	degenerative spermatocyte homolog 1, lipid desaturase (Drosophila)	2,49	chr1
DGKA	1606	diacylglycerol kinase, alpha 80kDa	5,45	chr12
DHRS1	115817	dehydrogenase/reductase (SDR family) member 1	2,31	chr14
DIO2	1734	Deiodinase, iodothyronine, type II	14,77	chr14
DKFZp434C0328	54762	hypothetical protein DKFZp434C0328	3,29	chr3
DKFZp434K2435	84216	hypothetical protein DKFZp434K2435	4,09	chr12
DKFZp434L142	51313	hypothetical protein DKFZp434L142	11,72	chr4
DKFZP564D166	26115	putative ankyrin-repeat containing protein	3,49	chr17
DKFZP564J0123	25915	nuclear protein E3-3	2,15	chr3
DKFZp564K142	84061	implantation-associated protein	2,46	chrX_random
DKFZP586D0919	25895	hepatocellularcarcinoma-associated antigen HCA557a	3,18	chr12
DKFZp686K1613	388957	Similar to BMP2 inducible kinase	3,12	chr2
DKFZp761B107	91050	Hypothetical protein DKFZp761B107 /// Similar to DKFZP434L187 protein	2,03	chr4
DKFZp761D112	84257	hypothetical protein DKFZp761D112	2,33	chr8

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DKK3	27122	dickkopf homolog 3 (Xenopus laevis)	19,69	chr11
DLG1	1739	discs, large homolog 1 (Drosophila)	3,05	chr3
DMN	23336	desmuslin	7,70	chr15
DNAJB12	54788	DnaJ (Hsp40) homolog, subfamily B, member 12	2,60	chr10
DNAJB14	79982	DnaJ (Hsp40) homolog, subfamily B, member 14	2,74	chr4
DNAJB4	11080	DnaJ (Hsp40) homolog, subfamily B, member 4	7,82	chr1
DNAJB9	4189	DnaJ (Hsp40) homolog, subfamily B, member 9	3,73	chr7
DNAJC13	23317	DnaJ (Hsp40) homolog, subfamily C, member 13	2,71	chr3
DNAJC3	5611	Hypothetical protein LOC144871	4,16	chr13
DNAPTP6	26010	DNA polymerase-transactivated protein 6	2,23	chr2
DNASE1L1	1774	deoxyribonuclease I-like 1	7,70	chrX
DNCLI2	1783	dynein, cytoplasmic, light intermediate polypeptide 2	2,08	chr16
DOCK10	55619	dedicator of cytokinesis 10	9,82	chr2
DOCK2	1794	Dedicator of cytokinesis 2	16,79	chr5
DPF3	8110	D4, zinc and double PHD fingers, family 3	6,47	chr14
DPP8	54878	Dipeptidyl-peptidase 8	2,27	chr15
DPY19L4	286148	dpy-19-like 4 (C. elegans)	2,64	chr8
DRAP1	10589	DR1-associated protein 1 (negative cofactor 2 alpha)	2,70	chr11
DSP	1832	desmoplakin	3,83	chr6
DUSP1	1843	dual specificity phosphatase 1	9,65	chr5
DUSP10	11221	dual specificity phosphatase 10	3,51	chr1
DUSP14	11072	dual specificity phosphatase 14	2,33	chr17
DUSP18	150290	dual specificity phosphatase 18	2,04	chr22
DYM	54808	Dymeclin	2,10	chr18
DYRK4	8798	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 4	3,97	chr12
DYSF	8291	dysferlin, limb girdle muscular dystrophy 2B (autosomal recessive)	2,48	chr2
EBI2	1880	Epstein-Barr virus induced gene 2 (lymphocyte-specific G protein-coupled receptor)	2,06	chr13
ECE1	1889	Endothelin converting enzyme 1	2,38	chr1
ECM1	1893	extracellular matrix protein 1	8,48	chr1
ECM2	1842	extracellular matrix protein 2, female organ and adipocyte specific	2,46	chr9
EDEM1	9695	ER degradation enhancer, mannosidase alpha-like 1	4,99	chr3
EDIL3	10085	EGF-like repeats and discoidin I-like domains 3	6,80	chr5
EDN1	1906	endothelin 1	3,78	chr6
EEA1	8411	early endosome antigen 1, 162kD	2,68	chr12
EEF1D	1936	Eukaryotic translation elongation factor 1 delta (guanine nucleotide exchange protein)	2,69	chr8

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EFHA2	286097	EF-hand domain family, member A2	5,77	chr8
EHD1	10938	EH-domain containing 1	4,00	chr11
EHD2	30846	EH-domain containing 2	24,04	chr1
EHD3	30845	EH-domain containing 3	4,30	chr2
EIF5A2	56648	eukaryotic translation initiation factor 5A2	4,68	chr3
ELF1	1997	E74-like factor 1 (ets domain transcription factor)	2,32	chr13
ELF4	2000	E74-like factor 4 (ets domain transcription factor)	12,20	chrX
ELK3	2004	ELK3, ETS-domain protein (SRF accessory protein 2)	10,83	chr12
ELMOD2	255520	ELMO domain containing 2	2,78	chr4
ELOVL1	64834	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 1	5,70	chr1
ELTD1	64123	EGF, latrophilin and seven transmembrane domain containing 1	4,27	chr1
EMILIN1	11117	elastin microfibril interfacer 1	12,99	chr2
EMP3	2014	epithelial membrane protein 3	14,12	chr19
ENG	2022	endoglin (Osler-Rendu-Weber syndrome 1)	3,87	chr9
ENTPD5	957	Ectonucleoside triphosphate diphosphohydrolase 5	2,93	chr14
EPB41L1	2036	Erythrocyte membrane protein band 4.1-like 1	4,95	chr5
EPB41L3	23136	erythrocyte membrane protein band 4.1-like 3	6,18	chr18
EPHA2	1969	EPH receptor A2	4,81	chr1
EPHA5	2044	EPH receptor A5	6,44	chr4
EPIM	2054	epimorphin	2,12	chr12
EPLIN	51474	epithelial protein lost in neoplasm beta	6,59	chr12
EPRS	2058	glutamyl-prolyl-tRNA synthetase	2,44	chr1
EPS15L1	58513	epidermal growth factor receptor pathway substrate 15-like 1	2,32	chr19
ERBB2IP	55914	erbb2 interacting protein	4,29	chr5
ERO1L	30001	ERO1-like (S. cerevisiae)	2,78	chr14
ERRFI1	54206	ERBB receptor feedback inhibitor 1	3,50	chr1
ETHE1	23474	ethylmalonic encephalopathy 1	3,35	chr19
ETS1	2113	v-ets erythroblastosis virus E26 oncogene homolog 1 (avian)	2,07	chr11
ETV5	2119	ets variant gene 5 (ets-related molecule)	2,34	chr3
ETV6	2120	ets variant gene 6 (TEL oncogene)	2,17	chr12
EVC	2121	Ellis van Creveld syndrome	3,60	chr4
EVI5	7813	ecotropic viral integration site 5	8,09	chr1
EXT2	2132	exostoses (multiple) 2	2,27	chr11
F25965	55957	protein F25965	3,09	chr19
F2R	2149	coagulation factor II (thrombin) receptor	7,70	chr5

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
FAM14A	83982	family with sequence similarity 14, member A	2,10	chr14
FAM18B	51030	family with sequence similarity 18, member B	3,53	chr16
FAM38A	9780	family with sequence similarity 38, member A	3,85	chr16
FAM43A	131583	family with sequence similarity 43, member A	2,78	chr3
FAM54B	56181	family with sequence similarity 54, member B	2,01	chr1
FAM55C	91775	family with sequence similarity 55, member C	7,99	chr3
FAM65A	79567	family with sequence similarity 65, member A	2,40	chr16
FAM73A	374986	family with sequence similarity 73, member A	3,98	chr1
FAM79A	127262	family with sequence similarity 79, member A	2,26	chr1
FAM8A1	51439	family with sequence similarity 8, member A1	3,51	chr6
FAM91A1	157769	family with sequence similarity 91, member A1	2,12	chr8
FAP	2191	fibroblast activation protein, alpha	50,54	chr2
FAS	355	Fas (TNF receptor superfamily, member 6)	12,93	chr10
FAT4	79633	FAT tumor suppressor homolog 4 (Drosophila)	2,38	chr4
FBLIM1	54751	filamin binding LIM protein 1	3,76	chr1
FBLN2	2199	fibulin 2	5,51	chr3
FBLN5	10516	fibulin 5	4,89	chr14
FBXL2	25827	F-box and leucine-rich repeat protein 2	2,70	chr3
FBXL3	26224	F-box and leucine-rich repeat protein 3	3,82	chr13
FBXL5	26234	F-box and leucine-rich repeat protein 5	3,24	chr4
FBXO3	26273	F-box protein 3	2,32	chr11
FBXO32	114907	F-box protein 32	4,52	chr8
FBXO6	26270	F-box protein 6	2,71	chr1
FBXO8	26269	F-box protein 8	3,50	chr4
FCGRT	2217	Fc fragment of IgG, receptor, transporter, alpha	2,18	chr19
FER1L3	26509	fer-1-like 3, myoferlin (C. elegans)	125,57	chr10
FGF1	2246	fibroblast growth factor 1 (acidic)	4,58	chr5
FGF5	2250	fibroblast growth factor 5	2,61	chr4
FGFR1OP2	26127	FGFR1 oncogene partner 2	4,33	chr12
FHL1	2273	four and a half LIM domains 1	4,26	chrX
FHL2	2274	four and a half LIM domains 2	6,90	chr2
FHL3	2275	four and a half LIM domains 3	2,28	chr1
FKBP14	55033	FK506 binding protein 14, 22 kDa	10,09	chr7
FLI1	2313	Friend leukemia virus integration 1	17,02	chr11
FLJ10260	55106	likely ortholog of mouse schlafen 3	2,48	chr17

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FLJ10808	55236	hypothetical protein FLJ10808	3,01	chr4
FLJ10980	56204	hypothetical protein FLJ10980	3,23	chr15
FLJ11259	55332	hypothetical protein FLJ11259	7,14	chr12
FLJ11273	54664	hypothetical protein FLJ11273	2,96	chr7
FLJ12649	79649	hypothetical protein FLJ12649	2,23	chrX
FLJ12681	64788	hypothetical protein FLJ12681	3,33	chr16
FLJ13391	84141	hypothetical protein FLJ13391	7,47	chr2
FLJ13448	80219	hypothetical protein FLJ13448	2,20	chr2
FLJ13710	79875	hypothetical protein FLJ13710	5,47	chr15
FLJ13855	65264	hypothetical protein FLJ13855	2,93	chr17
FLJ13868	64755	hypothetical protein FLJ13868	2,43	chr16
FLJ14213	79899	hypothetical protein FLJ14213	4,97	chr11
FLJ14800	84926	hypothetical protein FLJ14800	2,20	chr12
FLJ20186	54849	hypothetical protein FLJ20186	2,31	chr16
FLJ20254	54867	Hypothetical protein FLJ20254	3,45	chr2
FLJ20294	55626	Hypothetical protein FLJ20294	2,25	chr6
FLJ20298	54885	FLJ20298 protein	11,01	chrX
FLJ20481	54947	hypothetical protein FLJ20481	11,80	chr16
FLJ20507	55654	hypothetical protein FLJ20507	2,58	chr2
FLJ20920	80221	hypothetical protein FLJ20920	3,25	chr17
FLJ21075	80099	hypothetical protein FLJ21075	2,23	chr7
FLJ21159	79884	ASAP	2,55	chr4
FLJ21657	64417	hypothetical protein FLJ21657	2,99	chr5
FLJ22028	79912	hypothetical protein FLJ22028	3,38	chr12
FLJ22222	79701	hypothetical protein FLJ22222	2,66	chr17
FLJ22833	64859	hypothetical protein FLJ22833	29,06	chr2
FLJ22965	63932	hypothetical protein FLJ22965	2,02	chrX
FLJ23514	60494	hypothetical protein FLJ23514	2,32	chr11
FLJ23867	200058	hypothetical protein FLJ23867	2,65	chr1
FLJ30594	150622	hypothetical locus FLJ30594	3,70	chr17
FLJ30596	133686	hypothetical protein FLJ30596	2,77	chr5
FLJ31033	91351	hypothetical protein FLJ31033	2,62	chr4
FLJ34236	283373	hypothetical protein FLJ34236	2,11	chr12
FLJ34922	91607	likely ortholog of mouse schlafen 8/9	3,11	chr17
FLJ36748	134265	hypothetical protein FLJ36748	2,42	chr5

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FLJ38101	255919	hypothetical protein FLJ38101	2,28	chr16
FLJ38725	144811	hypothetical protein FLJ38725	7,54	chr13
FLJ39370	132720	hypothetical protein FLJ39370	6,14	chr4
FLJ39441	144108	hypothetical protein FLJ39441	2,18	chr11
FLJ43339	388115	FLJ43339 protein	4,21	chr15
FLJ44635	392490	TPT1-like protein	2,26	chrX
FLJ90166	164284	hypothetical protein FLJ90166	7,80	chr20
FLNA	2316	filamin A, alpha (actin binding protein 280)	6,93	chrX
FLNC	2318	filamin C, gamma (actin binding protein 280)	9,72	chr7
FLYWCH1	84256	FLYWCH-type zinc finger 1	3,14	chr16
FMN2	56776	formin 2	6,91	chr1
FN1	2335	fibronectin 1	178,10	chr2
FNDC3B	64778	fibronectin type III domain containing 3B	7,30	chr3
FOSL1	8061	FOS-like antigen 1	3,19	chr11
FOXD1	2297	forkhead box D1	25,91	chr5
FOXF1	2294	forkhead box F1	8,38	chr16
FOXF2	2295	forkhead box F2	3,12	chr6
FOXJ2	55810	forkhead box J2	2,42	chr12
FOXL1	2300	Forkhead box L1	6,23	chr16
FREQ	23413	Frequenin homolog (Drosophila)	2,16	chr9
FRS2	10818	Fibroblast growth factor receptor substrate 2	2,35	chr12
FSTL1	11167	follistatin-like 1	4,78	chr3
FSTL3	10272	follistatin-like 3 (secreted glycoprotein)	6,37	chr19
FTH1	2495	ferritin, heavy polypeptide 1	2,38	chr11
FTL	2512	Ferritin, light polypeptide	2,50	chrX
FUT6	2528	Fucosyltransferase 6 (alpha (1,3) fucosyltransferase)	2,79	chr16
FVT1	2531	Follicular lymphoma variant translocation 1	3,31	chr18
FYCO1	79443	FYVE and coiled-coil domain containing 1	3,80	chr3
FZD6	8323	frizzled homolog 6 (Drosophila)	5,16	chr8
GABARAP	11337	GABA(A) receptor-associated protein	2,04	chr17
GABRB1	2560	gamma-aminobutyric acid (GABA) A receptor, beta 1	2,41	chr4
GADD45A	1647	growth arrest and DNA-damage-inducible, alpha	11,34	chr1
GADD45B	4616	growth arrest and DNA-damage-inducible, beta	13,14	chr19
GALNACT-2	55454	chondroitin sulfate GalNAcT-2	6,52	chr10
GALNT2	2590	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 2 (GalNAc-T2)	6,45	chr1

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GALNT4	8693	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 4 (GalNAc-T4)	3,36	chr12
GALNT5	11227	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 5 (GalNAc-T5)	6,70	chr2
GANAB	23193	glucosidase, alpha; neutral AB	2,08	chr11
GAS2L1	10634	growth arrest-specific 2 like 1	3,98	chr22
GATA2	2624	GATA binding protein 2	5,09	chr3
GATA6	2627	GATA binding protein 6	9,85	chr18
GBA	2629	Glucosidase, beta; acid (includes glucosylceramidase)	4,52	chr1
GBA	2629 /// 2630	glucosidase, beta; acid (includes glucosylceramidase) /// glucosidase, beta; acid, pseudogene	2,77	chr1
GBE1	2632	glucan (1,4-alpha-), branching enzyme 1 (glycogen branching enzyme, Andersen disease, glycogen st	5,34	chr3
GBP1	2633	guanylate binding protein 1, interferon-inducible, 67kDa	28,18	chr1
GBP2	2634	guanylate binding protein 2, interferon-inducible /// guanylate binding protein 2, interferon-inducible	3,60	chr1
GBP3	2635	guanylate binding protein 3	34,83	chr1
GDF15	9518	growth differentiation factor 15	17,75	chr19
GEM	2669	GTP binding protein overexpressed in skeletal muscle	4,85	chr8
GHR	2690	growth hormone receptor	2,30	chr5
GIT2	9815	G protein-coupled receptor kinase interactor 2	3,76	chr12
GLIPR1	11010	GLI pathogenesis-related 1 (glioma)	110,49	chr12
GLIS1	148979	GLIS family zinc finger 1	2,87	chr1
GLRX	2745	glutaredoxin (thioltransferase)	2,97	chr14
GLRX2	51022	glutaredoxin 2	3,23	chr1
GLT8D1	55830	glycosyltransferase 8 domain containing 1	2,60	chr3
GLT8D2	83468	glycosyltransferase 8 domain containing 2	12,49	chr12
GLTP	51228	glycolipid transfer protein	2,84	chr12
GlyBP	9731	glycine-, glutamate-, thienylcyclohexylpiperidine-binding protein	3,62	chr1
GNA11	2767	Guanine nucleotide binding protein (G protein), alpha 11 (Gq class)	2,96	chr19
GNAI1	2770	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 1	2,56	chr7
GNAI2	2771	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2	2,96	chr3
GNAO1	2775	guanine nucleotide binding protein (G protein), alpha activating activity polypeptide O	2,19	chr16
GNB4	59345	guanine nucleotide binding protein (G protein), beta polypeptide 4	2,63	chr3
GNG11	2791	guanine nucleotide binding protein (G protein), gamma 11	4,07	chr7
GNPDA2	132789	glucosamine-6-phosphate deaminase 2	4,78	chr4
GNS	2799	glucosamine (N-acetyl)-6-sulfatase (Sanfilippo disease IIID)	6,57	chr12
GOLGA2	2801	golgi autoantigen, golgin subfamily a, 2	2,99	chr9
GOLGA3	2802	golgi autoantigen, golgin subfamily a, 3	3,30	chr12
GOLGB1	2804	Golgi autoantigen, golgin subfamily b, macrogolgin (with transmembrane signal), 1	2,12	chr3

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GOLPH4	27333	golgi phosphoprotein 4	3,03	chr3
GOLT1B	51026	golgi transport 1 homolog B (S. cerevisiae)	7,34	chr12
GOSR1	9527	golgi SNAP receptor complex member 1	2,31	chr17
GPR124	25960	G protein-coupled receptor 124	6,41	chr8
GPR126	57211	G protein-coupled receptor 126	3,17	chr6
GPR155	151556	G protein-coupled receptor 155	5,24	chr2
GPRC5A	9052	G protein-coupled receptor, family C, group 5, member A	17,86	chr12
GRN	2896	granulin	2,32	chr17
GSN	2934	gelsolin (amyloidosis, Finnish type)	5,06	chr9
GSTK1	373156	glutathione S-transferase kappa 1	2,08	chr7
GSTM2	2946	glutathione S-transferase M2 (muscle)	2,11	chr1
GTF2H1	2965	general transcription factor IIH, polypeptide 1, 62kDa	2,29	chr11
GTPBP5	26164	GTP binding protein 5 (putative)	2,86	chr20
GUK1	2987	guanylate kinase 1 /// guanylate kinase 1	2,41	chr1
H6PD	9563	hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)	4,63	chr1
HBEGF	1839	heparin-binding EGF-like growth factor	11,83	chr5
HBP1	26959	HMG-box transcription factor 1	2,71	chr7
HCFC2	29915	host cell factor C2	3,62	chr12
HDLBP	3069	high density lipoprotein binding protein (vigilin)	3,06	chr2
HECTD2	143279	HECT domain containing 2	2,37	chr10
HERC4	26091	hect domain and RLD 4	2,76	chr10
HERPUD1	9709	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1	9,52	chr16
HIF1A	3091	hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)	2,04	chr14
HIST1H2BC	8347	histone 1, H2bc	2,42	chr6
HIST1H4H	8365	histone 1, H4h	2,57	chr6
HIVEP3	59269	Human immunodeficiency virus type I enhancer binding protein 3	2,40	chr1
HLA-B	3106	major histocompatibility complex, class I, B	2,92	chr6
HLA-C	3107	major histocompatibility complex, class I, C	2,61	chr6
HLA-E	3133	major histocompatibility complex, class I, E	5,94	chr6
HLX1	3142	H2.0-like homeo box 1 (Drosophila)	2,35	chr1
HNRPLL	92906	heterogeneous nuclear ribonucleoprotein L-like	2,32	chr2
HNRPUL2	221092	heterogeneous nuclear ribonucleoprotein U-like 2	2,01	chr11
HOM-TES-103	25900	HOM-TES-103 tumor antigen-like	2,52	chr12
HOOK3	84376	Hook homolog 3 (Drosophila)	2,95	chr8
HOXB7	3217	homeo box B7	2,76	chr17

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HPCAL1	3241	hippocalcin-like 1	3,08	chr2
HRH1	3269	histamine receptor H1	9,88	chr3
HSPB8	26353	heat shock 22kDa protein 8	9,67	chr12
HSPG2	3339	heparan sulfate proteoglycan 2 (perlecan)	4,94	chr1
HT008	55852	uncharacterized hypothalamus protein HT008	2,11	chr17
HTRA1	5654	HtrA serine peptidase 1	7,83	chr10
IBRDC1	154214	IBR domain containing 1	3,31	chr6
ICHTHYIN	348938	ichthyin protein	7,55	chr5
ICK	22858	intestinal cell (MAK-like) kinase	2,16	chr6
IDS	3423	iduronate 2-sulfatase (Hunter syndrome)	6,12	chrX
IER3	8870	immediate early response 3	22,38	chr6
IER3IP1	51124	immediate early response 3 interacting protein 1	2,60	chr18
IER5	51278	immediate early response 5	5,96	chr1
IFIT2	3433	interferon-induced protein with tetratricopeptide repeats 2	2,94	chr10
IFIT3	3437	Interferon-induced protein with tetratricopeptide repeats 3	3,61	chr10
IFIT5	24138	interferon-induced protein with tetratricopeptide repeats 5	4,05	chr10
IFNAR1	3454	interferon (alpha, beta and omega) receptor 1	4,25	chr21
IFNGR2	3460	interferon gamma receptor 2 (interferon gamma transducer 1)	2,13	chr21
IFT20	90410	intraflagellar transport protein IFT20	3,44	chr17
IGFBP4	3487	insulin-like growth factor binding protein 4	4,71	chr17
IKBKE	9641	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon	2,48	chr1
IL10RB	3588	interleukin 10 receptor, beta	6,65	chr21
IL11	3589	interleukin 11	5,73	chr19
IL13RA1	3597	interleukin 13 receptor, alpha 1	11,07	chrX
IL15	3600	interleukin 15	3,11	chr4
IL1RAP	3556	interleukin 1 receptor accessory protein	2,59	chr3
IL6	3569	interleukin 6 (interferon, beta 2)	3,36	chr7
IL7R	3575	Interleukin 7 receptor	9,35	chr5
IL8	3576	interleukin 8	14,71	chr4
ILK	3611	integrin-linked kinase	3,30	chr11
IMPAD1	54928	inositol monophosphatase domain containing 1	4,98	chr8
IMPDH1	3614	IMP (inosine monophosphate) dehydrogenase 1	2,30	chr7
INHBA	3624	inhibin, beta A (activin A, activin AB alpha polypeptide)	113,49	chr7
INPP4B	8821	inositol polyphosphate-4-phosphatase, type II, 105kDa	7,24	chr4
INPP5A	3632	inositol polyphosphate-5-phosphatase, 40kDa	2,00	chr10

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IQWD1	55827	IQ motif and WD repeats 1	3,48	chr1
IRAK2	3656	interleukin-1 receptor-associated kinase 2	4,82	chr3
IRF2BP2	359948	interferon regulatory factor 2 binding protein 2	3,69	chr1
ISGF3G	10379	interferon-stimulated transcription factor 3, gamma 48kDa	2,21	chr14
ITGA11	22801	integrin, alpha 11	12,78	chr15
ITGA2	3673	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)	8,92	chr5
ITGA3	3675	integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)	6,45	chr17
ITGA5	3678	integrin, alpha 5 (fibronectin receptor, alpha polypeptide)	14,20	chr12
ITGB1	3688	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	8,89	chr10
ITGB1BP1	9270	integrin beta 1 binding protein 1	3,04	chr2
ITGB3	3690	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	3,21	chr17
ITM2B	9445	integral membrane protein 2B	2,02	chr13
ITPR2	3709	Family with sequence similarity 20, member C	2,21	chr12
JAK1	3716 /// 391045	Janus kinase 1 (a protein tyrosine kinase) /// similar to Solute carrier family 2, facilitated glucose trans	9,31	chr1
JAK2	3717	Janus kinase 2 (a protein tyrosine kinase)	2,41	chr9
JRKL	8690	jerky homolog-like (mouse)	2,56	chr11
JUN	3725	v-jun sarcoma virus 17 oncogene homolog (avian)	5,16	chr1
JUND	3727	jun D proto-oncogene	2,01	chr19
KATNAL1	84056	katanin p60 subunit A-like 1	3,79	chr13
KCNG1	3755	potassium voltage-gated channel, subfamily G, member 1	3,92	chr20
KCNMA1	3778	potassium large conductance calcium-activated channel, subfamily M, alpha member 1	18,21	chr10
KCTD10	83892	potassium channel tetramerisation domain containing 10	3,83	chr12
KCTD11	147040	potassium channel tetramerisation domain containing 11	2,09	chr17
KCTD18	130535	potassium channel tetramerisation domain containing 18	4,78	chr2
KCTD9	54793	potassium channel tetramerisation domain containing 9	2,44	chr9
KDELR2	11014	KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 2	4,73	chr7
KDELR3	11015	KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 3	43,78	chr22
KIAA0063	9929	KIAA0063 gene product	2,75	chr22
KIAA0090	23065	KIAA0090	2,14	chr1
KIAA0143	23167	KIAA0143 protein	2,03	chr8
KIAA0256	9728	KIAA0256 gene product	2,42	chr15
KIAA0268	7 /// 375056 /// 4	C219-reactive peptide /// AAAP6077 /// similar to C219-reactive peptide	2,32	chr1_random
KIAA0310	9919	KIAA0310	2,07	chr9
KIAA0372	9652	KIAA0372	4,17	chr5
KIAA0427	9811	KIAA0427	4,02	chr18

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KIAA0470	9859	KIAA0470	2,15	chr4
KIAA0527	26032	KIAA0527 protein	2,69	chr3
KIAA0543	23145	likely ortholog of mouse SCO-spondin	2,03	chr7
KIAA0652	9776	KIAA0652 gene product	3,19	chr11
KIAA0692	23141	KIAA0692 protein	2,19	chr12
KIAA0776	23376	KIAA0776	2,88	chr6
KIAA0802	23255	KIAA0802	2,25	chr18
KIAA1040	23041	KIAA1040 protein	2,82	chr12
KIAA1055	23102	KIAA1055 protein	2,42	chr15
KIAA1181	57222	endoplasmic reticulum-golgi intermediate compartment 32 kDa protein	6,03	chr5
KIAA1199	57214	KIAA1199	90,25	chr15
KIAA1432	57589	KIAA1432	4,51	chr9
KIAA1458	57606	KIAA1458 protein	2,67	chr4
KIAA1462	57608	KIAA1462	4,78	chr10
KIAA1539	80256	KIAA1539	4,18	chr9
KIAA1600	57700	KIAA1600	4,24	chr10
KIAA1632	57724	KIAA1632	3,06	chr18
KIAA1715	80856	KIAA1715	5,84	chr2
KIAA1754	85450	KIAA1754	2,75	chr10
KIAA1912	114800	KIAA1912 protein	6,59	chr2
KIAA1913	114801	KIAA1913	2,60	chr6
KIAA1949	170954	KIAA1949	7,66	chr6
KIAA1961	96459	KIAA1961 gene	2,24	chr5
KIAA1971	123720	similar to junction-mediating and regulatory protein p300 JMY	2,72	chr15
KIAA1972	89970	KIAA1972 protein	2,26	chr16
KIF5B	3799	kinesin family member 5B	3,38	chr10
KITLG	4254	KIT ligand	12,81	chr12
KLF10	7071	Kruppel-like factor 10	2,88	chr8
KLF2	10365	Kruppel-like factor 2 (lung)	2,68	chr19
KLF9	687	Kruppel-like factor 9	11,19	chr9
KLHL20	27252	kelch-like 20 (Drosophila)	2,41	chr1
KLHL9	55958	kelch-like 9 (Drosophila)	3,53	chr9
KRT10	3858	keratin 10 (epidermolytic hyperkeratosis; keratosis palmaris et plantaris)	2,53	chr17
KRTAP2-1	81872	keratin associated protein 2-1	10,76	chr17_random
LAMA4	3910	laminin, alpha 4	8,96	chr6

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
LAMB1	3912	laminin, beta 1	3,05	chr7
LAMC1	3915	laminin, gamma 1 (formerly LAMB2)	4,84	chr1
LARP6	55323	La ribonucleoprotein domain family, member 6	7,55	chr15
LASP1	3927	LIM and SH3 protein 1	3,61	chr17
LATS2	26524	LATS, large tumor suppressor, homolog 2 (Drosophila)	2,71	chr13
LDB3	11155	LIM domain binding 3	14,73	chr10
LENG4	79143	leukocyte receptor cluster (LRC) member 4	2,11	chr19
LEPR	3953 /// 54741	leptin receptor /// leptin receptor overlapping transcript	3,49	chr1
LEPRE1	64175	leucine proline-enriched proteoglycan (leprecan) 1	4,05	chr1
LEPREL2	10536	leprecan-like 2	2,51	chr12
LGALS3	3958 /// 81625	lectin, galactoside-binding, soluble, 3 (galectin 3) /// galectin-3 internal gene	10,80	chr14
LGALS3BP	3959	lectin, galactoside-binding, soluble, 3 binding protein	7,85	chr17
LGMN	5641	legumain	2,55	chr13
LHFP	10186	lipoma HMGIC fusion partner	8,04	chr13
LHX8	431707	LIM homeobox 8	5,89	chr1
LIF	3976	leukemia inhibitory factor (cholinergic differentiation factor)	8,10	chr22
LIG4	3981	ligase IV, DNA, ATP-dependent	3,28	chr13
LIMS1	3987	LIM and senescent cell antigen-like domains 1	3,84	chr2
LIMS3	96626	LIM and senescent cell antigen-like domains 3	7,42	chr2
LMAN1	3998	lectin, mannose-binding, 1	3,18	chr18
LMBRD2	92255	LMBR1 domain containing 2	3,11	chr5
LMCD1	29995	LIM and cysteine-rich domains 1	11,48	chr3
LMNA	4000	lamin A/C	11,58	chr1
LMO7	4008	LIM domain 7	22,68	chr13
LMOD1	25802	leiomodin 1 (smooth muscle)	9,05	chr1
LOC126917	126917	hypothetical protein LOC126917	3,01	chr1
LOC133308	133308	hypothetical protein BC009732	2,30	chr4
LOC134147	134147	similar to mouse 2310016A09Rik gene	2,24	chr5
LOC143903	143903	layilin	19,22	chr11
LOC144363	144363	hypothetical protein LOC144363	3,55	chr12
LOC144871	144871	Hypothetical protein LOC144871	3,58	chr13
LOC149478	149478	Hypothetical protein LOC149478	2,32	chr1
LOC162073	162073	Hypothetical protein LOC162073	10,19	chr16
LOC168850	168850	hypothetical protein LOC168850	3,81	chr7
LOC196463	196463	Hypothetical protein LOC196463	2,79	chr12

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
LOC203411	203411	hypothetical protein LOC203411	2,87	chrX
LOC203427	203427	similar to solute carrier family 25 , member 16	5,18	chrX
LOC222070	222070	hypothetical protein LOC222070	2,14	chr7
LOC253981	253981	hypothetical protein LOC253981	2,35	chr4
LOC255783	255783	hypothetical protein LOC255783	6,04	chr19
LOC283219	283219	hypothetical protein LOC283219	4,57	chr11
LOC283480	283480	Hypothetical protein LOC283480	3,34	chr13
LOC283537	283537	hypothetical protein LOC283537	5,46	chr13
LOC283687	283687	hypothetical protein LOC283687	2,61	chr15
LOC283824	283824	hypothetical protein LOC283824	4,06	chr16
LOC284454	284454	hypothetical protein LOC284454	3,16	chr19
LOC285550	285550	hypothetical protein LOC285550	3,21	chr4
LOC286144	286144	Hypothetical protein LOC286144	2,83	chr8
LOC286167	286167	hypothetical protein LOC286167	6,83	chr8
LOC286437	286437	hypothetical protein LOC286437	2,02	chrX
LOC338620	338620	hypothetical protein LOC338620	7,74	chr10
LOC339005	339005 /// 440253	hypothetical protein LOC339005 /// hypothetical protein LOC440253	2,68	chr15
LOC340061	340061	hypothetical protein LOC340061	9,37	chr5
LOC346887	346887	similar to solute carrier family 16 (monocarboxylic acid transporters), member 14	2,12	chr8
LOC374395	374395	similar to RIKEN cDNA 1810059G22	2,00	chr11
LOC387882	387882	hypothetical protein	12,25	chr12
LOC388114	388114	Hypothetical LOC388114	2,51	chr15
LOC389129	389129	similar to CG9996-PA	10,22	chr3
LOC400843	400843	hypothetical LOC400843	4,40	chr20
LOC401093	401093	hypothetical LOC401093	4,14	chr3
LOC401115	401115	hypothetical gene supported by BC038466; BC062790	2,14	chr4
LOC401212	401212	hypothetical gene supported by BX640700	2,71	chr5
LOC440536	440536	hypothetical gene supported by AK098812	3,65	chr19
LOC440885	440885	LOC440885	5,28	chr2
LOC440886	440886	Similar to lymphocyte-specific protein 1	8,46	chr2
LOC440928	440928	hypothetical gene supported by AK096649	4,77	chr2
LOC441212	441212	PNAS-13	2,18	chr7
LOC441461	441461	hypothetical gene supported by BC030123	12,72	chr9
LOC492311	492311	similar to bovine IgA regulatory protein	2,31	chr5
LOC493869	493869	similar to RIKEN cDNA 2310016C16	3,01	chr5

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
LOC51315	51315	hypothetical protein LOC51315	3,50	chr2
LOC51334	51334	mesenchymal stem cell protein DSC54	14,29	chr5
LOC554202	554202	hypothetical LOC554202	2,23	chr9
LOC92689	92689	hypothetical protein BC001096	39,06	chr4
LOC93349	93349	hypothetical protein BC004921	9,80	chr2
LOC96610	96610	Hypothetical protein similar to KIAA0187 gene product	3,16	chr9
LOX	4015	lysyl oxidase	388,97	chr5
LOXL4	84171	lysyl oxidase-like 4	2,54	chr10
LPP	4026	LIM domain containing preferred translocation partner in lipoma	4,68	chr3
LRAP	64167	Leukocyte-derived arginine aminopeptidase	4,38	chr5
LRIG3	121227	leucine-rich repeats and immunoglobulin-like domains 3	3,72	chr12
LRP1	4035	low density lipoprotein-related protein 1 (alpha-2-macroglobulin receptor)	4,26	chr12
LRP10	26020	low density lipoprotein receptor-related protein 10	15,41	chr14
LRP11	84918	low density lipoprotein receptor-related protein 11	3,70	chr6
LRRC15	131578	leucine rich repeat containing 15	2,69	chr3
LRRC35	219899	Leucine rich repeat containing 35	2,02	chr11
LRRC41	10489	leucine rich repeat containing 41	2,31	chr6
LRRC8C	84230	leucine rich repeat containing 8 family, member C	3,01	chr1
LRRFIP1	9208	leucine rich repeat (in FLII) interacting protein 1	2,48	chr2
LTB4DH	22949	leukotriene B4 12-hydroxydehydrogenase	2,20	chr9
LTBP2	4053	latent transforming growth factor beta binding protein 2	13,08	chr14
LTBP3	4054	latent transforming growth factor beta binding protein 3	9,77	chr11
LXN	56925	latexin	4,64	chr3
LY96	23643	lymphocyte antigen 96	3,86	chr8
LYPD1	116372	LY6/PLAUR domain containing 1	7,27	chr2
LYPLA3	23659	lysophospholipase 3 (lysosomal phospholipase A2)	2,15	chr16
LYSMD3	116068	LysM, putative peptidoglycan-binding, domain containing 3	2,57	chr5
LYST	1130	lysosomal trafficking regulator	6,29	chr1
LZTR2	89866	leucine zipper transcription regulator 2	3,05	chr1
LZTS1	11178	leucine zipper, putative tumor suppressor 1	3,77	chr8
M6PRBP1	10226	mannose-6-phosphate receptor binding protein 1	3,61	chr19
MAFF	23764	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)	13,02	chr22
MAGED1	9500	melanoma antigen family D, 1	2,62	chrX
MAGED2	10916	melanoma antigen family D, 2	2,62	chrX
MAN1B1	11253	mannosidase, alpha, class 1B, member 1	2,03	chr9

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MAN2B2	23324	mannosidase, alpha, class 2B, member 2	12,03	chr4
MANEA	79694	mannosidase, endo-alpha	2,28	chr6
MAP1A	4130	microtubule-associated protein 1A	16,47	chr15
MAP1B	4131	microtubule-associated protein 1B	6,41	chr5
MAP4K5	11183	mitogen-activated protein kinase kinase kinase kinase 5	3,18	chr14
MAPKBP1	23005	mitogen activated protein kinase binding protein 1	2,06	chr15
MARCH4	57574	membrane-associated ring finger (C3HC4) 4	2,94	chr2
MARVELD1	83742	MARVEL domain containing 1	3,21	chr10
MAWBP	64081	MAWD binding protein	2,62	chr10
MAX	4149	MYC associated factor X	2,35	chr14
MBD5	55777	methyl-CpG binding domain protein 5	3,24	chr2
MBNL1	4154	muscleblind-like (Drosophila)	22,48	chr3
MBTPS1	8720	membrane-bound transcription factor peptidase, site 1	2,51	chr16
MCAM	4162	melanoma cell adhesion molecule	5,47	chr11
MCFD2	90411	multiple coagulation factor deficiency 2	2,98	chr2
MDM2	4193	Mdm2, transformed 3T3 cell double minute 2, p53 binding protein (mouse)	2,82	chr12
MED8	112950	mediator of RNA polymerase II transcription, subunit 8 homolog (yeast)	3,65	chr1
MEF2D	4209	MADS box transcription enhancer factor 2, polypeptide D (myocyte enhancer factor 2D)	2,11	chr1
MET	4233	met proto-oncogene (hepatocyte growth factor receptor)	6,83	chr7
MFAP5	8076	microfibrillar associated protein 5	13,66	chr12
MFI2	4241	antigen p97 (melanoma associated) identified by monoclonal antibodies 133.2 and 96.5	3,08	chr3
MFSD1	64747	major facilitator superfamily domain containing 1	5,41	chr3
MGAT1	4245	mannosyl (alpha-1,3-)-glycoprotein beta-1,2-N-acetylglucosaminyltransferase	2,68	chr5
MGAT2	4247	mannosyl (alpha-1,6-)-glycoprotein beta-1,2-N-acetylglucosaminyltransferase	3,34	chr14
MGC14376	84981	hypothetical protein MGC14376	14,20	chr17
MGC15429	84836	hypothetical protein MGC15429	2,72	chr3
MGC15476	147906	thymus expressed gene 3-like	2,75	chr19
MGC15523	124565	hypothetical protein MGC15523	3,26	chr17
MGC16121	84848	Hypothetical protein MGC16121	2,74	chrX
MGC17330	113791	HGFL gene /// HGFL gene	3,20	chr22
MGC17337	91283	similar to RIKEN cDNA 5730528L13 gene	2,30	chr9
MGC17943	90488	hypothetical protein MGC17943	15,82	chr12
MGC20235	113277	hypothetical protein MGC20235	3,86	chr17
MGC23985	389336	similar to AVLV472	8,56	chr5
MGC26963	166929	hypothetical protein MGC26963	49,90	chr4

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MGC3123	79089	hypothetical protein MGC3123	2,23	chr17
MGC34646	157807	Hypothetical protein MGC34646	10,17	chr8
MGC34830	120196	hypothetical protein MGC34830	4,48	chr11
MGC4677	112597	hypothetical protein MGC4677	34,47	chr2
MGC5370	84825	hypothetical protein MGC5370	3,31	chr12
MGC5508	79073	hypothetical protein MGC5508	2,29	chr11
MGC5618	79099	hypothetical protein MGC5618	2,25	chr6
MGLL	11343	monoglyceride lipase /// monoglyceride lipase	10,84	chr3
MICA	4276 /// 4277	MHC class I polypeptide-related sequence A /// MHC class I polypeptide-related sequence B	8,37	chr6
MICA	4276	MHC class I polypeptide-related sequence A	7,74	chr6
MICAL2	9645	microtubule associated monoxygenase, calponin and LIM domain containing 2	127,34	chr11
MINA	84864	MYC induced nuclear antigen	2,01	chr3
MIRN21	406991	microRNA 21	7,85	chr9
MKRN2	23609	makorin, ring finger protein, 2	2,93	chr3
MLLT11	10962	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 11 /// my	2,34	chr1
MLPH	79083	melanophilin	8,12	chr2
MLXIP	22877	MLX interacting protein	2,75	chr12
MME	4311	membrane metallo-endopeptidase (neutral endopeptidase, enkephalinase, CALLA, CD10)	7,11	chr3
MMP1	4312	matrix metallopeptidase 1 (interstitial collagenase)	114,26	chr11
MMP14	4323	matrix metallopeptidase 14 (membrane-inserted)	2,53	chr14
MMP16	4325	matrix metallopeptidase 16 (membrane-inserted)	3,45	chr8
MMP19	4327	matrix metallopeptidase 19	2,74	chr12
MMP2	4313	matrix metallopeptidase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)	20,82	chr16
MOBKL2A	126308	MOB1, Mps One Binder kinase activator-like 2A (yeast)	6,42	chr19
MOCS2	4338	molybdenum cofactor synthesis 2	2,85	chr5
MONDOA	22877	MondoA	2,18	chr12
MOSPD1	56180	motile sperm domain containing 1	2,48	chrX
MOSPD2	158747	motile sperm domain containing 2	2,23	chrX
MRAS	22808	muscle RAS oncogene homolog	5,80	chr3
MRCL3	10627	myosin regulatory light chain MRCL3	2,21	chr18
MRCL3	103910 /// 10627	myosin regulatory light chain MRCL3 /// myosin regulatory light chain MRLC2	2,50	chr18
MRLC2	103910	myosin regulatory light chain MRLC2	2,26	chr18
MRVI1	10335	Murine retrovirus integration site 1 homolog	3,75	chr11
MSN	4478	moesin	4,80	chr5
MTCBP-1	55256	membrane-type 1 matrix metalloproteinase cytoplasmic tail binding protein-1	2,21	chr2

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
MTMR6	9107	myotubularin related protein 6	4,36	chr13
MVP	9961	major vault protein	18,90	chr16
MYH9	4627	myosin, heavy polypeptide 9, non-muscle	6,41	chr22
MYL9	10398	myosin, light polypeptide 9, regulatory	21,07	chr20
MYLK	4638	myosin, light polypeptide kinase	19,76	chr3
MYO1C	4641	myosin IC	4,16	chr17
MYO5A	4644	myosin VA (heavy polypeptide 12, myoxin)	2,29	chr15
MYOCD	93649	myocardin	25,49	chr17
NAGK	55577	N-acetylglucosamine kinase /// N-acetylglucosamine kinase	2,55	chr2
NAP5	344148	Nck-associated protein 5	4,32	chr2
NAPA	8775	N-ethylmaleimide-sensitive factor attachment protein, alpha	3,08	chr19
NBL1	4681	neuroblastoma, suppression of tumorigenicity 1	3,22	chr1
NBR1	4077	neighbor of BRCA1 gene 1	2,15	chr17
NCOA3	8202	nuclear receptor coactivator 3	2,43	chr20
NCOA7	135112	nuclear receptor coactivator 7	7,07	chr6
NCSTN	23385	nicastrin	2,37	chr1
NDEL1	81565	nudE nuclear distribution gene E homolog like 1 (A. nidulans) /// nudE nuclear distribution gene E hom	3,19	chr17
NDFIP1	80762	Nedd4 family interacting protein 1	3,72	chr5
NDFIP2	54602	Nedd4 family interacting protein 2	4,80	chr13
NDP52	10241	nuclear domain 10 protein	2,54	chr17
NDUFS1	4719	NADH dehydrogenase (ubiquinone) Fe-S protein 1, 75kDa (NADH-coenzyme Q reductase)	2,29	chr2
NECAP2	55707	NECAP endocytosis associated 2	2,18	chr1
NEDD4	4734	neural precursor cell expressed, developmentally down-regulated 4	15,69	chr15
NEGR1	257194	neuronal growth regulator 1	7,89	chr1
NEK6	10783	NIMA (never in mitosis gene a)-related kinase 6	6,67	chr9
NEK7	140609	NIMA (never in mitosis gene a)-related kinase 7	19,50	chr1
NF1	4763	Neurofibromin 1 (neurofibromatosis, von Recklinghausen disease, Watson disease)	2,22	chr17
NF2	4771	neurofibromin 2 (bilateral acoustic neuroma)	3,06	chr22
NFE2L2	4780	nuclear factor (erythroid-derived 2)-like 2	3,06	chr2
NFIC	4782	nuclear factor I/C (CCAAT-binding transcription factor)	4,04	chr19
NFKB1	4790	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (p105)	4,13	chr4
NFKBIZ	64332	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, zeta	5,86	chr3
NGFB	4803	nerve growth factor, beta polypeptide	2,34	chr1
NIPSNAP3A	25934	nipsnap homolog 3A (C. elegans) /// nipsnap homolog 3A (C. elegans)	5,15	chr9
NKIRAS1	28512	NFKB inhibitor interacting Ras-like 1	2,40	chr3

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NKIRAS2	28511	NFKB inhibitor interacting Ras-like 2	2,35	chr17
NKX3-1	4824	NK3 transcription factor related, locus 1 (Drosophila)	2,35	chr8
NNMT	4837	nicotinamide N-methyltransferase	261,83	chr11
NNT	23530	nicotinamide nucleotide transhydrogenase	3,92	chr5
NOD27	84166	nucleotide-binding oligomerization domains 27	2,94	chr16
NOL3	8996	nucleolar protein 3 (apoptosis repressor with CARD domain)	2,25	chr16
NPAL3	57185	NIPA-like domain containing 3	9,52	chr1
NPAS2	4862	neuronal PAS domain protein 2	3,09	chr2
NQO1	1728	NAD(P)H dehydrogenase, quinone 1	6,69	chr16
NR3C1	2908	nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor) /// nuclear receptor subfam	7,55	chr5
NRXN3	9369	neurexin 3	3,03	chr14
NS3TP2	65983	HCV NS3-transactivated protein 2	2,89	chr5
NS5ATP13TP2	220323	NS5ATP13TP2 protein	5,13	chr11
NSF	4905	N-ethylmaleimide-sensitive factor	2,57	chr17
NT5E	4907	5'-nucleotidase, ecto (CD73)	83,19	chr6
NTN4	59277	netrin 4	68,83	chr12
NUCB1	4924	nucleobindin 1	2,67	chr19
NUCB2	4925	nucleobindin 2	4,76	chr11
NUDT4	11163	Nudix (nucleoside diphosphate linked moiety X)-type motif 4 pseudogene 2	4,85	chr5
NUMB	8650	numb homolog (Drosophila)	2,52	chr14
OACT2	129642	O-acyltransferase (membrane bound) domain containing 2	2,58	chr2
OCRL	4952	oculocerebrorenal syndrome of Lowe	2,34	chrX
OGFRL1	79627	opioid growth factor receptor-like 1	2,63	chr6
ORMDL1	94101	ORM1-like 1 (S. cerevisiae)	2,79	chr2
OS9	10956	amplified in osteosarcoma	4,49	chr12
OSAP	84709	ovary-specific acidic protein	11,35	chr4
OSMR	9180	Oncostatin M receptor	49,48	chr5
OSTF1	26578	osteoclast stimulating factor 1	2,21	chr9
OXTR	5021	oxytocin receptor	94,66	chr3
P4HA1	5033	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alpha polypeptide I	5,06	chr10
P4HA2	8974	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alpha polypeptide II	21,34	chr5
P4HA3	283208	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alpha polypeptide III	3,18	chr11
P4HB	5034	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), beta polypeptide (protein di	3,93	chr17
PACS1	55690	phosphofurin acidic cluster sorting protein 1	2,20	chr11
PAEP	5047	progestagen-associated endometrial protein (placental protein 14, pregnancy-associated endometrial	3,72	chr19

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PAK2	5062	p21 (CDKN1A)-activated kinase 2	2,34	chr3
PALM2	114299	paralemmin 2	2,50	chr9
PALM2-AKAP2	445815	PALM2-AKAP2 protein	2,95	chr9
PAM	5066	peptidylglycine alpha-amidating monooxygenase	4,53	chr5
PANX1	24145	Pannexin 1	2,46	chr11
PBXIP1	57326	pre-B-cell leukemia transcription factor interacting protein 1	2,67	chr1
PCDHGC3	/ 56105 /// 56106	protocadherin gamma subfamily C, 3 /// protocadherin gamma subfamily C, 3 /// protocadherin gamma	3,34	chr5
PCGF1	84759	polycomb group ring finger 1	2,08	chr2
PCOLCE	5118	procollagen C-endopeptidase enhancer	7,16	chr7
PCSK7	9159	Proprotein convertase subtilisin/kexin type 7	10,70	chr11
PCYOX1	51449	prenylcysteine oxidase 1	2,05	chr2
PCYT1A	5130	Phosphate cytidylyltransferase 1, choline, alpha	3,18	chr3
PDCD6	10016 /// 57491	programmed cell death 6 /// aryl-hydrocarbon receptor repressor	8,20	chr5
PDE1C	5137	phosphodiesterase 1C, calmodulin-dependent 70kDa	3,29	chr7
PDE4B	5142	phosphodiesterase 4B, cAMP-specific (phosphodiesterase E4 dunce homolog, Drosophila)	2,67	chr1
PDE4DIP	9659	phosphodiesterase 4D interacting protein (myomegalin)	5,79	chr1
PDE5A	8654	phosphodiesterase 5A, cGMP-specific	2,11	chr4
PDE7B	27115	phosphodiesterase 7B	2,68	chr6
PDE8A	5151	phosphodiesterase 8A	5,18	chr15
PDGFRL	5157	platelet-derived growth factor receptor-like	5,77	chr8
PDK2	5164	pyruvate dehydrogenase kinase, isoenzyme 2	2,17	chr17
PDLIM2	64236	PDZ and LIM domain 2 (mystique)	2,68	chr8
PDLIM3	27295	PDZ and LIM domain 3	6,40	chr4
PDLIM4	8572	PDZ and LIM domain 4	5,04	chr5
PDLIM5	10611	PDZ and LIM domain 5	7,12	chr4
PDLIM7	9260	PDZ and LIM domain 7 (enigma)	7,69	chr5
PEA15	8682	phosphoprotein enriched in astrocytes 15	8,19	chr1
PEAR1	375033	platelet endothelial aggregation receptor 1	9,29	chr1
PEX10	5192	Peroxisome biogenesis factor 10	3,21	chr1
PEX11B	8799	peroxisomal biogenesis factor 11B	2,81	chr1
PGCP	10404	plasma glutamate carboxypeptidase	5,60	chr8
PGM3	5238	phosphoglucomutase 3	3,07	chr6
PGRMC2	10424	progesterone receptor membrane component 2	2,08	chr4
PHC3	80012	polyhomeotic like 3 (Drosophila)	2,09	chr3
PHLDA2	7262	pleckstrin homology-like domain, family A, member 2	15,10	chr11

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PHLDA3	23612	pleckstrin homology-like domain, family A, member 3	4,83	chr1
PHLDB2	90102	pleckstrin homology-like domain, family B, member 2	14,96	chr3
PHTF2	57157	putative homeodomain transcription factor 2	2,69	chr7
PICALM	8301	phosphatidylinositol binding clathrin assembly protein	4,52	chr11
PIGX	54965	phosphatidylinositol glycan, class X	2,28	chr3
PIK4CB	5298	phosphatidylinositol 4-kinase, catalytic, beta polypeptide	3,53	chr1
PIP5K1C	23396	phosphatidylinositol-4-phosphate 5-kinase, type I, gamma	2,21	chr19
PITRM1	10531	pitrilysin metallopeptidase 1	2,67	chr10
PJA2	9867	praja 2, RING-H2 motif containing	3,02	chr5
PKIG	11142	protein kinase (cAMP-dependent, catalytic) inhibitor gamma	2,08	chr20
PLA2G4A	5321	phospholipase A2, group IVA (cytosolic, calcium-dependent)	3,38	chr1
PLAU	5328	plasminogen activator, urokinase	16,09	chr10
PLAUR	5329	plasminogen activator, urokinase receptor	18,67	chr19
PLD1	5337	phospholipase D1, phophatidylcholine-specific	4,36	chr3
PLD3	23646	phospholipase D family, member 3	3,91	chr19
PLDN	26258	pallidin homolog (mouse)	2,39	chr15
PLEC1	5339	plectin 1, intermediate filament binding protein 500kDa	2,66	chr8
PLEKHA2	59339	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 2	18,71	chr8
PLEKHA3	65977	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 3	2,58	chr2
PLEKHC1	10979	pleckstrin homology domain containing, family C (with FERM domain) member 1	2,27	chr14
PLK2	10769	polo-like kinase 2 (Drosophila)	18,51	chr5
PLK3	1263	polo-like kinase 3 (Drosophila)	2,02	chr1
PLOD1	5351	procollagen-lysine 1, 2-oxoglutarate 5-dioxygenase 1	9,76	chr1
PLOD2	5352	procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2	10,14	chr3
PLOD3	8985	procollagen-lysine, 2-oxoglutarate 5-dioxygenase 3	3,27	chr7
PLP2	5355	proteolipid protein 2 (colonic epithelium-enriched)	20,06	chrX
PLSCR3	254863 /// 57048	phospholipid scramblase 3 /// hypothetical protein MGC40107	3,10	chr17
PLSCR4	57088	phospholipid scramblase 4	2,86	chr3
PLXNA3	55558	plexin A3	2,83	chrX
PLXND1	23129	plexin D1	3,22	chr3
PME-1	51400	protein phosphatase methylesterase-1	3,23	chr11
PMM1	5372	phosphomannomutase 1	3,75	chr22
POLH	5429	Polymerase (DNA directed), eta	3,42	chr6
POLK	51426	polymerase (DNA directed) kappa	3,54	chr5
POLR3GL	84265	polymerase (RNA) III (DNA directed) polypeptide G (32kD) like	6,75	chr1

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POPDC3	64208	popeye domain containing 3	4,44	chr6
PORIMIN	114908	pro-oncosis receptor inducing membrane injury gene	2,81	chr11
PPAPDC1A	196051	phosphatidic acid phosphatase type 2 domain containing 1A	14,97	chr10
PPARA	5465	peroxisome proliferative activated receptor, alpha	2,14	chr22
PPARD	5467	peroxisome proliferative activated receptor, delta	2,94	chr6
PPARG	5468	Peroxisome proliferative activated receptor, gamma	2,00	chr3
PPFIBP1	8496	PTPRF interacting protein, binding protein 1 (liprin beta 1)	5,22	chr12
PPIC	5480	peptidylprolyl isomerase C (cyclophilin C)	4,59	chr5
PPM1K	152926	protein phosphatase 1K (PP2C domain containing)	2,38	chr4
PPP1R12A	4659	protein phosphatase 1, regulatory (inhibitor) subunit 12A	2,00	chr12
PPP1R12B	4660	protein phosphatase 1, regulatory (inhibitor) subunit 12B	2,04	chr1
PPP1R15A	23645	protein phosphatase 1, regulatory (inhibitor) subunit 15A	3,29	chr19
PPP1R2	5504	protein phosphatase 1, regulatory (inhibitor) subunit 2	2,07	chr5
PPP1R3C	5507	protein phosphatase 1, regulatory (inhibitor) subunit 3C	6,33	chr10
PPP3CB	5532	protein phosphatase 3 (formerly 2B), catalytic subunit, beta isoform (calcineurin A beta)	2,37	chr10
PPP3CC	5533	protein phosphatase 3 (formerly 2B), catalytic subunit, gamma isoform (calcineurin A gamma)	6,33	chr8
PRAF2	11230	PRA1 domain family, member 2	5,78	chrX
PRB1	440083 /// 5542	proline-rich protein BstNI subfamily 1 /// proline-rich protein BstNI subfamily 2	2,66	chr12
PRDM2	7799	PR domain containing 2, with ZNF domain	2,02	chr1
PRG1	5552	proteoglycan 1, secretory granule	268,53	chr10
PRICKLE2	166336	prickle-like 2 (Drosophila)	5,66	chr3
PRKACB	5567	protein kinase, cAMP-dependent, catalytic, beta	2,71	chr1
PRKAG1	5571	protein kinase, AMP-activated, gamma 1 non-catalytic subunit	2,55	chr12
PRKAG2	51422	protein kinase, AMP-activated, gamma 2 non-catalytic subunit	6,38	chr7
PRKCDBP	112464	protein kinase C, delta binding protein	5,23	chr11
PRKCE	5581	protein kinase C, epsilon	4,13	chr2
PRKCSH	5589	protein kinase C substrate 80K-H	2,24	chr19
PRNP	5621	prion protein (p27-30) (Creutzfeld-Jakob disease, Gerstmann-Strausler-Scheinker syndrome, fatal fam	8,86	chr20
PRO1073	29005	PRO1073 protein	3,57	chr11
PRO1855	55379	hypothetical protein PRO1855	2,19	chr17
PRRG1	5638	proline rich Gla (G-carboxyglutamic acid) 1	3,54	chrX
PRSS12	8492	Protease, serine, 12 (neurotrypsin, motopsin)	8,46	chr4
PSCD3	9265	pleckstrin homology, Sec7 and coiled-coil domains 3	2,71	chr7
PSMB2	5690	proteasome (prosome, macropain) subunit, beta type, 2	2,58	chr1
PSTPIP2	9050	proline-serine-threonine phosphatase interacting protein 2	3,08	chr18

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PTGER2	5732	prostaglandin E receptor 2 (subtype EP2), 53kDa	2,68	chr14
PTGER4	5734	prostaglandin E receptor 4 (subtype EP4)	4,84	chr5
PTGFR	5737	prostaglandin F receptor (FP)	2,67	chr1
PTGFRN	5738	prostaglandin F2 receptor negative regulator	3,47	chr1
PTGS2	5743	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)	8,89	chr1
PTHLH	5744	parathyroid hormone-like hormone /// parathyroid hormone-like hormone	8,74	chr12
PTK9	5756	PTK9 protein tyrosine kinase 9	4,53	chr12
PTP4A1	7803	protein tyrosine phosphatase type IVA, member 1	3,48	chr6
PTP4A2	8073	protein tyrosine phosphatase type IVA, member 2	2,64	chr1
PTPLA	9200	protein tyrosine phosphatase-like (proline instead of catalytic arginine), member a	2,53	chr10
PTPN11	5781	protein tyrosine phosphatase, non-receptor type 11 (Noonan syndrome 1)	3,00	chr12
PTPN9	5780	protein tyrosine phosphatase, non-receptor type 9	2,21	chr15
PTPNS1	140885	protein tyrosine phosphatase, non-receptor type substrate 1	2,90	chr20
PTRF	284119	polymerase I and transcript release factor	22,23	chr17
PTX1	51290	PTX1 protein	2,21	chr12
PVR	5817	poliovirus receptor	3,52	chr19
PXDN	7837	peroxidasin homolog (Drosophila)	3,26	chr2
PXK	54899	PX domain containing serine/threonine kinase	5,67	chr3
PXN	5829	paxillin	2,21	chr12
PYCR1	5831	pyrroline-5-carboxylate reductase 1	2,10	chr17
PYGB	5834	phosphorylase, glycogen; brain	3,06	chr20
QIL1	125988	QIL1 protein	2,87	chr19
QSCN6	5768	quiescin Q6	5,39	chr1
RAB11FIP2	22841	RAB11 family interacting protein 2 (class I)	2,07	chr10
RAB11FIP5	26056	RAB11 family interacting protein 5 (class I)	4,01	chr2
RAB18	22931	RAB18, member RAS oncogene family	2,36	chr10
RAB2	5862	RAB2, member RAS oncogene family	2,97	chr8
RAB23	51715	RAB23, member RAS oncogene family	4,32	chr6
RAB27A	5873	RAB27A, member RAS oncogene family	4,20	chr15
RAB32	10981	RAB32, member RAS oncogene family	15,55	chr6
RAB33A	9363	RAB33A, member RAS oncogene family	2,53	chrX
RAB3GAP1	22930	RAB3 GTPase activating protein subunit 1 (catalytic)	2,33	chr2
RAB6A	5870 /// 84084	RAB6A, member RAS oncogene family /// RAB6C, member RAS oncogene family	2,01	chr2
RAB6IP2	23085	RAB6 interacting protein 2	2,73	chr12
RAB9B	51209	RAB9B, member RAS oncogene family	2,03	chrX

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RABGEF1	27342	RAB guanine nucleotide exchange factor (GEF) 1	2,80	chr7
RAFTLIN	23180	raft-linking protein	42,35	chr3
RAGE	5891	renal tumor antigen	7,59	chr14
RAI14	26064	retinoic acid induced 14	3,36	chr5
RALB	5899	v-ral simian leukemia viral oncogene homolog B (ras related; GTP binding protein)	3,79	chr2
RaLP	399694	rai-like protein	3,49	chr15
RAP1A	5906	RAP1A, member of RAS oncogene family	2,74	chr1
RAP1GDS1	5910	RAP1, GTP-GDP dissociation stimulator 1	3,76	chr4
RAP2C	57826	RAP2C, member of RAS oncogene family	2,01	chrX
RAPH1	65059	Ras association (RalGDS/AF-6) and pleckstrin homology domains 1	5,11	chr2
RASA1	5921	RAS p21 protein activator (GTPase activating protein) 1	2,72	chr5
RASSF4	83937	Ras association (RalGDS/AF-6) domain family 4	2,07	chr10
RASSF8	11228	Ras association (RalGDS/AF-6) domain family 8	2,01	chr12
RB1	5925	retinoblastoma 1 (including osteosarcoma)	2,97	chr13
RBL2	5934	retinoblastoma-like 2 (p130)	3,17	chr16
RBM18	92400	RNA binding motif protein 18	3,58	chr9
RBM9	23543	RNA binding motif protein 9	3,26	chr22
RBMS2	5939	RNA binding motif, single stranded interacting protein 2	3,74	chr12
RECK	8434	reversion-inducing-cysteine-rich protein with kazal motifs	7,09	chr9
RECQL	5965	RecQ protein-like (DNA helicase Q1-like)	3,08	chr12
REEP3	221035	Receptor accessory protein 3	4,45	chr10
RELA	5970	v-rel reticuloendotheliosis viral oncogene homolog A, nuclear factor of kappa light polypeptide gene er	2,84	chr11
RFK	55312	riboflavin kinase	2,94	chr9
RGMB	285704	RGM domain family, member B	5,25	chr5
RGNEF	64283	Rho-guanine nucleotide exchange factor	3,79	chr5
RGS10	6001	regulator of G-protein signalling 10	2,66	chr10
RHBDL7	57414	rhomboid, veinlet-like 7 (Drosophila)	2,65	chr7
RHOB	388	ras homolog gene family, member B	2,95	chr2
RHOC	389	ras homolog gene family, member C	10,36	chr1
RHOG	391	ras homolog gene family, member G (rho G)	2,44	chr11
RHOJ	57381	ras homolog gene family, member J	13,07	chr14
RHOQ	23433	ras homolog gene family, member Q	2,45	chr2
RHOQ	23433 /// 284988	ras homolog gene family, member Q /// similar to ARHQ protein	3,10	chr2
RIG	10530	regulated in glioma	4,17	chr11
RIOK3	8780	RIO kinase 3 (yeast) /// RIO kinase 3 (yeast)	2,29	chr18

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RIPK1	8737	receptor (TNFRSF)-interacting serine-threonine kinase 1	3,05	chr6
RNASE4	6038	ribonuclease, RNase A family, 4	10,14	chr14
RND3	390	Rho family GTPase 3	7,69	chr2
RNF11	26994	ring finger protein 11	2,28	chr1
RNF14	9604	ring finger protein 14	3,12	chr5
RNF150	57484	ring finger protein 150	2,03	chr4
RNF185	91445	ring finger protein 185	2,60	chr22
RNF6	6049	ring finger protein (C3H2C3 type) 6	3,18	chr13
RNH1	6050	ribonuclease/angiogenin inhibitor 1	3,39	chr11
RP11-378J18.4	375056	C219-reactive peptide	2,95	chr1
RP2	6102	retinitis pigmentosa 2 (X-linked recessive)	3,03	chrX
RPL23AP7	118433	ribosomal protein L23a pseudogene 7	3,44	chr1
RPS6KA2	6196	ribosomal protein S6 kinase, 90kDa, polypeptide 2	4,08	chr6
RRAD	6236	Ras-related associated with diabetes	2,65	chr16
RRAGB	10325	Ras-related GTP binding B	2,23	chrX
RRAS	6237	related RAS viral (r-ras) oncogene homolog	16,59	chr19
RSN	6249	restin (Reed-Steinberg cell-expressed intermediate filament-associated protein)	5,89	chr12
RTN4	57142	reticulon 4	2,24	chr2
RUNX2	860	runt-related transcription factor 2	10,68	chr6
RUSC2	9853	RUN and SH3 domain containing 2	3,56	chr9
RXRB	6257	retinoid X receptor, beta	2,65	chr6
S100A11	6282	S100 calcium binding protein A11 (calgizzarin)	11,04	chr1
S100A13	6284	S100 calcium binding protein A13	2,75	chr1
S100A16	140576	S100 calcium binding protein A16	14,87	chr1
SACS	26278	spastic ataxia of Charlevoix-Saguenay (sacsin)	2,33	chr13
SAMD4	23034	sterile alpha motif domain containing 4	5,95	chr14
SAMD9	54809	sterile alpha motif domain containing 9	6,51	chr7
SAR1B	51128	SAR1 gene homolog B (S. cerevisiae)	3,44	chr5
SAT	6303	Spermidine/spermine N1-acetyltransferase	6,26	chrX
SATB2	23314	SATB family member 2	2,94	chr2
SATL1	340562	Spermidine/spermine N1-acetyl transferase-like 1	4,19	chrX
SBDS	51119	Shwachman-Bodian-Diamond syndrome	3,63	chr7
SBDS /// SBDSP	155370 /// 51119	Shwachman-Bodian-Diamond syndrome /// Shwachman-Bodian-Diamond syndrome pseudogene	3,67	chr7
SC65	10609	synaptonemal complex protein SC65	5,32	chr17
SCAP2	8935	src family associated phosphoprotein 2	2,24	chr7

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SCARB2	950	scavenger receptor class B, member 2	3,11	chr4
SCARF2	91179	scavenger receptor class F, member 2	3,06	chr22
SCFD2	152579	sec1 family domain containing 2	2,52	chr4
SCG2	7857	secretogranin II (chromogranin C)	17,83	chr2
SCN9A	6335	sodium channel, voltage-gated, type IX, alpha	2,32	chr2
SCOC	60592	short coiled-coil protein	2,51	chr4
SCRN3	79634	secernin 3	2,23	chr2
SDC3	9672	syndecan 3 (N-syndecan)	3,71	chr1
SDF4	51150	stromal cell derived factor 4	3,46	chr1
SDSL	113675	serine dehydratase-like	2,61	chr12
SEC14L1	6397	SEC14-like 1 (S. cerevisiae)	2,54	chr17
SEC22L1	9554	SEC22 vesicle trafficking protein-like 1 (S. cerevisiae)	12,92	chr1
SEC23A	10484	Sec23 homolog A (S. cerevisiae)	5,11	chr14
SEC24A	10802	SEC24 related gene family, member A (S. cerevisiae)	2,31	chr5
SEC31L1	22872	SEC31-like 1 (S. cerevisiae)	3,56	chr4
SEC61A1	29927	Sec61 alpha 1 subunit (S. cerevisiae)	3,65	chr3
SEL1L	6400	sel-1 suppressor of lin-12-like (C. elegans)	8,09	chr14
SELM	140606	selenoprotein M	9,68	chr22
SELPLG	6404	selectin P ligand	2,08	chr12
SERINC1	57515	serine incorporator 1	4,99	chr6
SERPINB7	8710	serpin peptidase inhibitor, clade B (ovalbumin), member 7	14,00	chr18
SERPINB8	5271	serpin peptidase inhibitor, clade B (ovalbumin), member 8	2,86	chr18
SERPINE1	5054	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	201,36	chr7
SERTAD1	29950	SERTA domain containing 1	2,14	chr19
SEZ6L2	26470	seizure related 6 homolog (mouse)-like 2	2,28	chr16
SFT2D2	375035	SFT2 domain containing 2	2,44	chr1
SFXN3	81855	sideroflexin 3 /// sideroflexin 3	7,99	chr10
SGCB	6443	sarcoglycan, beta (43kDa dystrophin-associated glycoprotein)	2,43	chr4
SGCD	6444	Sarcoglycan, delta (35kDa dystrophin-associated glycoprotein)	2,03	chr5
SGIP1	84251	SH3-domain GRB2-like (endophilin) interacting protein 1	6,24	chr1
SGPP1	81537	sphingosine-1-phosphate phosphatase 1	3,12	chr14
SH3BGRL	6451	SH3 domain binding glutamic acid-rich protein like	2,87	chrX
SH3BGRL3	83442	SH3 domain binding glutamic acid-rich protein like 3 /// SH3 domain binding glutamic acid-rich protein	8,11	chr1
SH3GLB1	51100	SH3-domain GRB2-like endophilin B1	3,88	chr1
SH3KBP1	30011	SH3-domain kinase binding protein 1	2,83	chrX

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SH3MD2	57630	SH3 multiple domains 2	5,41	chr4
SH3MD4	344558	SH3 multiple domains 4	5,15	chr2
SH3RF2	153769	SH3 domain containing ring finger 2	3,56	chr5
SHB	6461	Src homology 2 domain containing adaptor protein B	2,10	chr9
SHC1	6464	SHC (Src homology 2 domain containing) transforming protein 1	2,21	chr1
SIL1	64374	SIL1 homolog, endoplasmic reticulum chaperone (S. cerevisiae)	7,07	chr5
SIRT2	22933	sirtuin (silent mating type information regulation 2 homolog) 2 (S. cerevisiae)	2,87	chr19
SIX1	6495	Sine oculis homeobox homolog 1 (Drosophila)	112,74	chr14
SLC10A3	8273	solute carrier family 10 (sodium/bile acid cotransporter family), member 3	2,72	chrX
SLC12A2	6558	solute carrier family 12 (sodium/potassium/chloride transporters), member 2	2,07	chr5
SLC12A4	6560	solute carrier family 12 (potassium/chloride transporters), member 4	2,84	chr16
SLC16A7	9194	solute carrier family 16 (monocarboxylic acid transporters), member 7	4,54	chr12
SLC17A5	26503	solute carrier family 17 (anion/sugar transporter), member 5	7,10	chr6
SLC20A2	6575	solute carrier family 20 (phosphate transporter), member 2	2,33	chr8
SLC22A18	5002	solute carrier family 22 (organic cation transporter), member 18	4,89	chr11
SLC22A4	6583	solute carrier family 22 (organic cation transporter), member 4	2,24	chr5
SLC25A20	788	solute carrier family 25 (carnitine/acylcarnitine translocase), member 20	2,63	chr3
SLC25A24	29957	solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 24	2,07	chr1
SLC25A32	81034	solute carrier family 25, member 32 /// solute carrier family 25, member 32	2,69	chr8
SLC26A5	375611	Solute carrier family 26, member 5 (prestin)	2,72	chr7
SLC2A10	81031	solute carrier family 2 (facilitated glucose transporter), member 10 /// solute carrier family 2 (facilitated	5,13	chr20
SLC30A5	64924	solute carrier family 30 (zinc transporter), member 5	2,22	chr5
SLC30A7	148867	solute carrier family 30 (zinc transporter), member 7	4,96	chr1
SLC31A2	1318	solute carrier family 31 (copper transporters), member 2	3,06	chr9
SLC35A3	23443	solute carrier family 35 (UDP-N-acetylglucosamine (UDP-GlcNAc) transporter), member A3	2,31	chr1
SLC35B2	347734	solute carrier family 35, member B2	2,47	chr6
SLC35B3	51000	solute carrier family 35, member B3	4,68	chr6
SLC35C1	55343	solute carrier family 35, member C1	2,03	chr11
SLC35E1	79939	solute carrier family 35, member E1	3,25	chr19
SLC35F5	80255	solute carrier family 35, member F5	4,00	chr2
SLC39A13	91252	solute carrier family 39 (zinc transporter), member 13	2,82	chr11
SLC39A6	25800	solute carrier family 39 (zinc transporter), member 6	2,72	chr18
SLC41A2	84102	solute carrier family 41, member 2	2,05	chr12
SLC41A3	54946	solute carrier family 41, member 3	2,02	chr3
SLC4A4	8671	solute carrier family 4, sodium bicarbonate cotransporter, member 4	5,47	chr4

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SLC7A11	23657	solute carrier family 7, (cationic amino acid transporter, y+ system) member 11	3,15	chr4
SLIT3	6586	slit homolog 3 (Drosophila)	3,10	chr5
SLITL2	114990	slit-like 2 (Drosophila)	3,55	chr16
SMAP1L	64744	stromal membrane-associated protein 1-like	4,65	chr1
SMARCA2	6595	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2	3,65	chr9
SMC5L1	23137	SMC5 structural maintenance of chromosomes 5-like 1 (yeast)	2,42	chr9
SMPD1	6609	sphingomyelin phosphodiesterase 1, acid lysosomal (acid sphingomyelinase)	3,77	chr11
SMURF2	64750	SMAD specific E3 ubiquitin protein ligase 2	12,21	chr17
SMYD2	56950	SET and MYND domain containing 2	2,18	chr1
SNAG1	112574	Sorting nexin associated golgi protein 1	2,44	chr5
SNTB2	6645	syntrophin, beta 2 (dystrophin-associated protein A1, 59kDa, basic component 2)	2,26	chr16
SNX13	23161	Sorting nexin 13	2,65	chr7
SNX14	57231	sorting nexin 14	2,58	chr6
SNX19	399979	sorting nexin 19	3,68	chr11
SNX3	8724	sorting nexin 3	3,05	chr6
SNX9	51429	sorting nexin 9	2,01	chr6
SOAT1	6646	sterol O-acyltransferase (acyl-Coenzyme A: cholesterol acyltransferase) 1	6,88	chr1
SOCS5	9655	suppressor of cytokine signaling 5	4,44	chr2
SOD3	6649	superoxide dismutase 3, extracellular	2,35	chr4
SP100	6672	nuclear antigen Sp100	24,52	chr2
SPARC	6678	secreted protein, acidic, cysteine-rich (osteonectin)	42,54	chr5
SPATA18	132671	spermatogenesis associated 18 homolog (rat)	7,26	chr4
SPATA20	64847	spermatogenesis associated 20	2,71	chr17
SPATS2	65244	spermatogenesis associated, serine-rich 2	3,85	chr12
SPCS3	60559	signal peptidase complex subunit 3 homolog (S. cerevisiae)	2,77	chr4
SPIRE1	56907	spire homolog 1 (Drosophila)	2,55	chr18
SPOCD1	90853	SPOC domain containing 1	39,33	chr1
SPOP	8405	speckle-type POZ protein	2,45	chr17
SPSB1	80176	splA/ryanodine receptor domain and SOCS box containing 1	4,31	chr1
SPTAN1	6709	Spectrin, alpha, non-erythrocytic 1 (alpha-fodrin) /// CDNA FLJ44613 fis, clone BRACE2012814, highly	5,43	chr9
SQRDL	58472	sulfide quinone reductase-like (yeast)	8,57	chr15
SQSTM1	8878	sequestosome 1	3,18	chr5
SRA1	10011	steroid receptor RNA activator 1	2,05	chr5
SRGAP1	57522	SLIT-ROBO Rho GTPase activating protein 1	3,81	chr12
SRPR	6734	signal recognition particle receptor ('docking protein')	5,02	chr11

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
SRPX	8406	sushi-repeat-containing protein, X-linked	7,97	chrX
SRPX2	27286	sushi-repeat-containing protein, X-linked 2	18,18	chrX
SRXN1	140809	sulfiredoxin 1 homolog (S. cerevisiae)	2,09	chr20
SSPN	8082	sarcospan (Kras oncogene-associated gene)	16,19	chr12
SSR2	6746	signal sequence receptor, beta (translocon-associated protein beta)	2,83	chr1
ST3GAL1	6482	ST3 beta-galactoside alpha-2,3-sialyltransferase 1	5,49	chr8
ST7	7982	suppression of tumorigenicity 7	2,02	chr7
STAM2	10254	signal transducing adaptor molecule (SH3 domain and ITAM motif) 2	3,97	chr2
STARD13	90627	START domain containing 13	7,46	chr13
STAT1	6772	signal transducer and activator of transcription 1, 91kDa	2,12	(vide)
STAT2	6773	signal transducer and activator of transcription 2, 113kDa	2,11	chr12
STAT6	6778	signal transducer and activator of transcription 6, interleukin-4 induced	2,49	chr12
STCH	6782	stress 70 protein chaperone, microsome-associated, 60kDa	2,70	chr21
STK10	6793	serine/threonine kinase 10	2,21	chr5
STK17B	9262	Basic leucine zipper and W2 domains 1	13,41	chr2
STK32B	55351	serine/threonine kinase 32B	4,59	chr4
STOML1	9399	stomatin (EPB72)-like 1	3,40	chr15
STS	412	steroid sulfatase (microsomal), arylsulfatase C, isozyme S	2,37	chrX
STS-1	84959	Cbl-interacting protein Sts-1	13,09	chr11
STX5A	6811	syntaxin 5A	2,81	chr11
STXBP1	6812	syntaxin binding protein 1	2,79	chr9
SUMF1	285362	sulfatase modifying factor 1	2,32	chr3
SUPT6H	6830	suppressor of Ty 6 homolog (S. cerevisiae)	2,27	chr17
SUSD1	64420	sushi domain containing 1	2,64	chr9
SYBL1	6845	synaptobrevin-like 1	2,90	chrX
SYDE1	85360	synapse defective 1, Rho GTPase, homolog 1 (C. elegans)	3,99	chr19
SYNJ1	8867	synaptojanin 1	2,29	chr21
SYNJ2	8871	synaptojanin 2	7,52	chr6
SYNPO	11346	synaptopodin	25,03	chr5
SYNPO2	171024	synaptopodin 2	32,72	chr4
SYTL4	94121	Synaptotagmin-like 4 (granuphilin-a)	3,38	chrX
TACC1	6867	transforming, acidic coiled-coil containing protein 1	8,32	chr8
TAF13	6884	TAF13 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 18kDa	2,18	chr1
TAGLN	6876	transgelin	25,80	chr11
TAGLN2	8407	transgelin 2	6,46	chr1

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
TANK	10010	TRAF family member-associated NFKB activator	4,16	chr2
TAPBP	6892	TAP binding protein (tapasin)	2,27	chr6
TAX1BP3	30851	Tax1 (human T-cell leukemia virus type I) binding protein 3	3,35	chr17
TBC1D10B	26000	TBC1 domain family, member 10B	2,05	chr16
TBC1D19	55296	TBC1 domain family, member 19	2,57	chr4
TBC1D2	55357	TBC1 domain family, member 2	3,50	chr9
TBC1D20	128637	TBC1 domain family, member 20	2,22	chr20
TBL2	26608	transducin (beta)-like 2	2,31	chr7
TBX2	6909	T-box 2	3,54	chr17
TBX3	6926	T-box 3 (ulnar mammary syndrome)	5,02	chr12
TCEA3	6920	transcription elongation factor A (SII), 3	5,15	chr1
TCEAL1	9338	transcription elongation factor A (SII)-like 1	2,94	chrX
TCEAL3	85012	transcription elongation factor A (SII)-like 3	3,89	chrX
TCEB1	6921	transcription elongation factor B (SIII), polypeptide 1 (15kDa, elongin C)	2,02	chr8
TCIRG1	10312	T-cell, immune regulator 1, ATPase, H+ transporting, lysosomal V0 protein a isoform 3	2,21	chr11
TCP11L1	55346	t-complex 11 (mouse) like 1	3,21	chr11
TCTA	6988	T-cell leukemia translocation altered gene	2,52	chr3
TCTE1L	6990	t-complex-associated-testis-expressed 1-like	4,95	chr20
TCTE3	6991	t-complex-associated-testis-expressed 3	2,17	chr6
TDE1	10955	tumor differentially expressed 1	3,61	chr20
TERF2IP	54386	telomeric repeat binding factor 2, interacting protein	3,89	chr16
TES	26136	testis derived transcript (3 LIM domains)	4,38	chr7
TESK1	7016	testis-specific kinase 1	2,11	chr9
TEX261	113419	testis expressed sequence 261	3,48	chr2
TFG	10342	TRK-fused gene	2,05	chr3
TGFB1	7040	transforming growth factor, beta 1 (Camurati-Engelmann disease)	2,33	chr19
TGFB1I1	7041	transforming growth factor beta 1 induced transcript 1	32,03	chr16
TGFBR2	7048	transforming growth factor, beta receptor II (70/80kDa)	11,19	chr3
TGM2	7052	transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase)	24,74	chr20
TGOLN2	10618	trans-golgi network protein 2	4,37	chr2
THBD	7056	thrombomodulin	6,10	chr20
THBS1	7057	thrombospondin 1	76,57	chr15
THSD4	79875	Thrombospondin, type I, domain containing 4	4,83	chr15
TICAM2	353376	toll-like receptor adaptor molecule 2	8,89	chr5
TIMM17A	10440	translocase of inner mitochondrial membrane 17 homolog A (yeast)	2,14	chr1

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TIMP1	7076	TIMP metallopeptidase inhibitor 1	6,85	chrX
TIPARP	25976	TCDD-inducible poly(ADP-ribose) polymerase	10,37	chr3
TLOC1	7095	translocation protein 1	3,35	chr3
TLR4	7099	toll-like receptor 4 /// toll-like receptor 4	4,58	chr9
TM4SF1	4071	transmembrane 4 L six family member 1	48,84	chr3
TM7SF1	7107	transmembrane 7 superfamily member 1 (upregulated in kidney)	2,27	chr1
TM9SF1	10548	transmembrane 9 superfamily member 1	2,73	chr14
TMBIM1	64114	transmembrane BAX inhibitor motif containing 1	2,78	chr2
TMCO1	54499	transmembrane and coiled-coil domains 1	2,37	chr1
TMCO3	55002	transmembrane and coiled-coil domains 3	4,78	chr13
TMED3	23423	transmembrane emp24 protein transport domain containing 3	2,28	chr15
TMED7	51014	transmembrane emp24 protein transport domain containing 7	2,44	chr5
TMEM14A	28978	transmembrane protein 14A	2,43	chr6
TMEM16D	121601	transmembrane protein 16D	2,46	chr12
TMEM16F	196527	transmembrane protein 16F	2,61	chr12
TMEM17	200728	transmembrane protein 17	2,04	chr2
TMEM30A	55754	transmembrane protein 30A	7,85	chr6
TMEM43	79188	transmembrane protein 43	2,80	chr3
TMEM45A	55076	transmembrane protein 45A	2,67	chr3
TMEM47	83604	transmembrane protein 47	2,45	chrX
TMEM49	81671	transmembrane protein 49	4,57	chr17
TMEM55A	55529	transmembrane protein 55A	2,21	chr8
TMEM65	157378	transmembrane protein 65	3,26	chr8
TMEM87B	84910	Transmembrane protein 87B	4,46	chr2
TMEM9B	56674	TMEM9 domain family, member B	2,23	chr11
TMF1	7110	TATA element modulatory factor 1	2,82	chr3
TMOD3	29766	tropomodulin 3 (ubiquitous)	3,17	chr15
TMSB10	9168	thymosin, beta 10	2,57	chr2
TNFAIP6	7130	tumor necrosis factor, alpha-induced protein 6	2,49	chr2
TNFRSF10B	8795	tumor necrosis factor receptor superfamily, member 10b	4,42	chr8
TNFRSF10D	8793	tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain	17,91	chr8
TNFRSF1A	7132	tumor necrosis factor receptor superfamily, member 1A	6,21	chr12
TNFSF4	7292	tumor necrosis factor (ligand) superfamily, member 4 (tax-transcriptionally activated glycoprotein 1, 34	8,61	chr1
TNIP1	10318	TNFAIP3 interacting protein 1	2,96	chr5
TNS3	64759	Tensin 3	4,74	chr7

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TOR1AIP2	163590	Torsin A interacting protein 2	2,79	chr1
TP53INP2	58476	tumor protein p53 inducible nuclear protein 2	2,64	chr20
TPCN1	53373	two pore segment channel 1	2,75	chr12
TPM2	7169	tropomyosin 2 (beta)	7,37	chr9
TPM3	7170 /// 7171	tropomyosin 3 /// tropomyosin 4	7,84	chr3
TPM4	7171	tropomyosin 4	6,47	chr3
TPST1	8460	tyrosylprotein sulfotransferase 1	3,35	chr7
TRA1	7184	tumor rejection antigen (gp96) 1	2,05	(vide)
TRADD	8717	TNFRSF1A-associated via death domain	4,41	chr16
TRAF3	7187	TNF receptor-associated factor 3	3,00	chr14
TRAM1	23471	translocation associated membrane protein 1	2,74	chr8
TRAPPC1	58485	trafficking protein particle complex 1	3,18	chr17
TRAPPC3	27095	trafficking protein particle complex 3	2,12	chr1
TRIB3	57761	tribbles homolog 3 (Drosophila)	5,27	chr20
TRIM16 /// LOC1	10626 /// 147166	tripartite motif-containing 16 /// similar to tripartite motif-containing 16; estrogen-responsive B box prot	6,36	chr17
TRIM34	445372 /// 53840	tripartite motif-containing 34 /// tripartite motif-containing 6 and tripartite motif-containing 34	2,06	chr11
TRIM5	85363	tripartite motif-containing 5	2,89	chr11
TRIM56	81844	Tripartite motif-containing 56	2,32	chr7
TRIM58	25893	tripartite motif-containing 58	4,25	chr1
TRIM62	55223	tripartite motif-containing 62	2,54	chr1
TRIM8	81603	tripartite motif-containing 8 /// tripartite motif-containing 8	3,71	chr10
TRIO	7204	triple functional domain (PTPRF interacting)	3,18	chr5
TRIOBP	11078	TRIO and F-actin binding protein	2,09	chr22
TRIP11	9321	thyroid hormone receptor interactor 11	2,29	chr14
TRPC4	7223	transient receptor potential cation channel, subfamily C, member 4	3,31	chr13
TRPS1	7227	trichorhinophalangeal syndrome I	4,44	chr8
TSC22D2	9819	TSC22 domain family, member 2	2,33	chr3
TSPAN10	83882	tetraspanin 10	2,35	chr17
TSPAN31	6302	tetraspanin 31	2,16	chr12
TTC8	123016	tetratricopeptide repeat domain 8	2,88	chr14
TTYH2	94015	tweety homolog 2 (Drosophila)	2,18	chr17
TTYH3	80727	tweety homolog 3 (Drosophila)	2,65	chr7
TUBA3	7846	tubulin, alpha 3	2,00	chr12
TUFT1	7286	tuftelin 1	4,04	chr1
TULP3	7289	tubby like protein 3	2,11	chr12

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TWIST1	7291	twist homolog 1 (acrocephalosyndactyly 3; Saethre-Chotzen syndrome) (Drosophila)	10,84	chr7
TWSG1	57045	twisted gastrulation homolog 1 (Drosophila)	3,64	chr18
TXNDC10	54495	thioredoxin domain containing 10	3,71	chr18
TXNDC11	51061	thioredoxin domain containing 11	3,94	chr16
TXNDC13	56255	thioredoxin domain containing 13	2,65	chr20
TXNRD1	7296	thioredoxin reductase 1	3,06	chr12
TXNRD3	114112	thioredoxin reductase 3	2,06	chr3
UACA	55075	uveal autoantigen with coiled-coil domains and ankyrin repeats	5,87	chr15
UAP1	6675	UDP-N-acteylglucosamine pyrophosphorylase 1	5,83	chr1
UBE2B	7320	ubiquitin-conjugating enzyme E2B (RAD6 homolog) /// ubiquitin-conjugating enzyme E2B (RAD6 homo	2,59	chr5
UBE2Q2	92912	ubiquitin-conjugating enzyme E2Q (putative) 2	2,76	chr15
UBE2W	55284	ubiquitin-conjugating enzyme E2W (putative)	2,32	chr8
UBL3	5412	ubiquitin-like 3	2,60	chr13
UBXD1	80700	UBX domain containing 1	3,08	chr19
UEV3	55293	Ubiquitin-conjugating enzyme E2-like	8,22	chr11
UFM1	51569	ubiquitin-fold modifier 1	3,62	chr13
UGCG	7357	UDP-glucose ceramide glucosyltransferase	4,24	chr9
UGCGL1	56886	UDP-glucose ceramide glucosyltransferase-like 1	2,14	chr2
UHMK1	127933	U2AF homology motif (UHM) kinase 1	6,04	chr1
ULBP2	80328	UL16 binding protein 2	24,08	chr6
UNQ1912	345757	HGS_RE408	5,13	chr5
URB	151887	steroid sensitive gene 1	147,43	chr3
UROS	7390	uroporphyrinogen III synthase (congenital erythropoietic porphyria)	2,02	chr10
USP15	9958	ubiquitin specific peptidase 15	2,63	chr12
USP38	84640	ubiquitin specific peptidase 38	2,19	chr4
USP40	55230	ubiquitin specific peptidase 40	2,38	chr2
VAMP3	9341	vesicle-associated membrane protein 3 (cellubrevin) /// vesicle-associated membrane protein 3 (cellub	3,14	chr1
VCPIP1	80124	Valosin containing protein (p97)/p47 complex interacting protein 1	2,83	chr8
VDR	7421	vitamin D (1,25- dihydroxyvitamin D3) receptor	3,81	chr12
VEGF	7422	vascular endothelial growth factor	3,89	chr6
VEPH1	79674	ventricular zone expressed PH domain homolog 1 (zebrafish)	16,65	chr3
VGCNL1	259232	Voltage gated channel like 1	6,11	chr13
VGL-3	389136	vestigial-like 3	26,25	chr3
VIM	7431	vimentin	4,65	chr10
WARS	7453	tryptophanyl-tRNA synthetase	2,30	chr14

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
WBP5	51186	WW domain binding protein 5	2,61	chrX
WDR26	80232	WD repeat domain 26	3,10	chr1
WDR41	55255	WD repeat domain 41	3,20	chr5
WDR47	22911	WD repeat domain 47	4,32	chr1
WHDC1L2	440253	WAS protein homology region 2 domain containing 1-like 1	2,46	chr15
WIG1	64393	p53 target zinc finger protein	14,99	chr3
WIPI49	55062	WD40 repeat protein Interacting with phosphoInositides of 49kDa	9,13	chr17
WSB2	55884	WD repeat and SOCS box-containing 2	2,97	chr12
XRN1	54464	5'-3' exoribonuclease 1	2,40	chr3
YIF1A	10897	Yip1 interacting factor homolog A (S. cerevisiae)	2,35	chr11
YIPF3	25844	Yip1 domain family, member 3	2,44	chr6
YIPF4	84272	Yip1 domain family, member 4	3,37	chr2
YIPF5	81555	Yip1 domain family, member 5	8,82	chr5
YKT6	10652	SNARE protein Ykt6	2,31	chr7
YSG2	54414	Ysg2 homolog (mouse) /// Ysg2 homolog (mouse)	6,08	chr11
YWHAZ	7534	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	2,63	chr8
ZBTB1	22890	zinc finger and BTB domain containing 1	3,05	chr14
ZBTB38	253461	zinc finger and BTB domain containing 38	4,45	chr3
ZBTB41	360023	zinc finger and BTB domain containing 41	4,03	chr1
ZC3H7A	29066	zinc finger CCCH-type containing 7A	2,09	chr16
ZDHHC24	254359	zinc finger, DHHC-type containing 24	2,06	chr19
ZDHHC9	51114	Zinc finger, DHHC-type containing 9	2,07	chrX
ZFP91	80829	zinc finger protein 91 homolog (mouse)	2,38	chr11
ZFPL1	7542	zinc finger protein-like 1	4,15	chr11
ZHX3	23051	zinc fingers and homeoboxes 3	2,66	chr20
ZMYM6	9204	zinc finger, MYM-type 6	2,79	chr1
ZNF236	7776	zinc finger protein 236	2,07	chr18
ZNF25	219749	zinc finger protein 25 (KOX 19)	9,71	chr10
ZNF275	10838	zinc finger protein 275	2,60	chrX
ZNF294	26046	zinc finger protein 294	2,01	chr21
ZNF365	22891	zinc finger protein 365	2,90	chr10
ZNF469	84627	zinc finger protein 469	7,92	chr16
ZNF537	57616	zinc finger protein 537	4,61	chr19
ZNF575	284346	zinc finger protein 575	2,66	chr19
ZNF599	148103	zinc finger protein 599	2,09	chr19

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Gene Symbol	Entrez Gene	Gene Title	MPC_up	Chromosome Number(Avadis)
ZNF650	130507	zinc finger protein 650	2,13	chr2
ZNF654	55279	Zinc finger protein 654	2,78	chr3
ZNHIT1	10467	zinc finger, HIT type 1	2,48	chr7
		(vide)	66,75	chr17
		wingless-type MMTV integration site family, member 5A /// wingless-type MMTV integration site family	37,13	chr2
		syncoilin, intermediate filament 1 /// syncoilin, intermediate filament 1	9,57	chr3
		protein kinase C, alpha	6,99	chr5
		Fucosyltransferase 1 (galactoside 2-alpha-L-fucosyltransferase, H blood group)	4,06	chrY
		sterol carrier protein 2 /// sterol carrier protein 2	2,44	(vide)
		transmembrane protein with EGF-like and two follistatin-like domains 2 /// transmembrane protein with	2,30	chr4

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Table S9 : Genes overexpressed in MPC compared to hES and down-regulated in NPC compared to hES (94 genes FC>2 ; α<0.05)

Gene Symbol	Entrez Gene	Gene Title	MPC_up	NPC_down	Chromosome Number(Avadis)
ACSL1	2180	acyl-CoA synthetase long-chain family member 1	4,65	2,48	chr4
ADM	133	adrenomedullin	2,37	2,02	chr11
AER61	285203	AER61 glycosyltransferase	2,05	2,95	chr3
AK2	204	adenylate kinase 2	5,50	2,32	chr1
ANXA4	307	annexin A4	2,99	2,67	chr2
AP2S1	1175	adaptor-related protein complex 2, sigma 1 subunit	2,12	2,04	chr19
ARF4	378	ADP-ribosylation factor 4	2,73	2,25	chr3
BAG2	9532	BCL2-associated athanogene 2	2,08	4,88	chr6
BMPR2	659	bone morphogenetic protein receptor, type II (serine/threonine kinase)	11,78	2,18	chr2
BTBD7	55727	BTB (POZ) domain containing 7	2,88	3,07	chr14
C6orf62	81688	chromosome 6 open reading frame 62	2,02	2,14	chr6
CALU	813	calumenin	5,44	2,00	chr7
CBR3	874	carbonyl reductase 3	3,59	4,42	chr21
CD164	8763	CD164 antigen, sialomucin	2,57	2,47	chr6
CD24	934	CD24 antigen (small cell lung carcinoma cluster 4 antigen)	2,83	15,01	chr5
CDK6	1021	cyclin-dependent kinase 6	24,64	3,10	chr7
CHES1	1112	checkpoint suppressor 1	2,07	2,22	chr14
CHURC1	91612	churchill domain containing 1	2,50	2,05	chr1
CLCC1	23155	chloride channel CLIC-like 1	2,05	2,38	chr1
CRTAP	10491	cartilage associated protein	3,03	2,22	chr3
CTSC	1075	cathepsin C	2,73	5,33	chr11
CTTN	2017	cortactin	4,24	2,25	chr11
CXCL12	6387	chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)	2,80	4,19	chr10
CXorf39	139231	Chromosome X open reading frame 39	2,37	2,36	chrX
DKFZP564J0863	25923	DKFZP564J0863 protein	3,99	3,00	chr11
DOCK5	80005	dedicator of cytokinesis 5	3,84	3,08	chr8
DSTN	11034	Destrin (actin depolymerizing factor)	2,81	2,37	chr20
EHD4	30844	EH-domain containing 4	3,75	2,20	chr15
EIF2C2	27161	Eukaryotic translation initiation factor 2C, 2	6,05	2,23	chr15
ELL2	22936	elongation factor, RNA polymerase II, 2	4,14	3,13	chr1
FLJ11151	55313	Hypothetical protein FLJ11151	3,59	2,06	chr16
FLNB	2317	filamin B, beta (actin binding protein 278)	2,06	2,37	chr3
FXYD5	53827	FXYD domain containing ion transport regulator 5	3,33	6,47	chr19
GFPT1	2673	glutamine-fructose-6-phosphate transaminase 1	2,82	2,20	chr2

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GLS	2744	glutaminase	17,00	2,14	chr2
GNB1	2782	guanine nucleotide binding protein (G protein), beta polypeptide 1	3,97	2,06	chr1
HSPB1	3315	heat shock 27kDa protein 1	11,96	2,93	chr7
IGFBP6	3489	insulin-like growth factor binding protein 6	7,75	2,36	chr12
ITCH	83737	itchy homolog E3 ubiquitin protein ligase (mouse)	2,85	2,04	chr20
JAK1	3716	Janus kinase 1 (a protein tyrosine kinase)	5,81	2,20	chr1
JAZF1	221895	juxtaposed with another zinc finger gene 1	2,18	4,31	chr7
KIAA1404	57169	KIAA1404 protein	2,00	2,16	chr20
KLF7	8609	Kruppel-like factor 7 (ubiquitous)	3,30	2,26	chr2
LACTB	114294	lactamase, beta	2,37	2,62	chr15
LAMP2	3920	lysosomal-associated membrane protein 2	6,02	2,16	chrX
LGALS1	3956	lectin, galactoside-binding, soluble, 1 (galectin 1)	52,69	13,73	chr22
LOC151194	151194	similar to hepatocellular carcinoma-associated antigen HCA557b	2,09	2,47	chr2
LOC201895	201895	hypothetical protein LOC201895	4,58	2,28	chr4
LOC441762	441762	Similar to CG7467-PA /// Similar to CG7467-PA	2,16	2,64	chr16
MAP1LC3B	81631	microtubule-associated protein 1 light chain 3 beta	4,53	3,04	chr12
MAP3K5	4217	mitogen-activated protein kinase kinase kinase 5	2,25	2,98	chr6
MAP4	4134	microtubule-associated protein 4	5,40	2,64	chr3
MAPK1	5594	mitogen-activated protein kinase 1	2,26	2,51	chr22
MAPKAP1	79109	mitogen-activated protein kinase associated protein 1	2,72	2,96	chr9
ME1	4199	Malic enzyme 1, NADP(+)-dependent, cytosolic	12,94	2,20	chr6
MEF2A	4205	MADS box transcription enhancer factor 2, polypeptide A (myocyte enhancer factor 2A)	2,45	2,22	chr15
MGC11324	84803	hypothetical protein MGC11324 /// hypothetical protein MGC11324	2,89	2,30	chr4
MT2A	4502	metallothionein 2A	3,32	5,41	chr16
NCBP2	22916	Nuclear cap binding protein subunit 2, 20kDa	2,14	2,33	chr3
PAPSS2	9060	3'-phosphoadenosine 5'-phosphosulfate synthase 2	6,50	4,71	chr10
PHLDA1	22822	Pleckstrin homology-like domain, family A, member 1	3,23	3,12	chr12
PINK1	65018	PTEN induced putative kinase 1	2,72	2,16	chr1
PKIB	5570	protein kinase (cAMP-dependent, catalytic) inhibitor beta	2,33	2,69	chr6
PPGB	5476	protective protein for beta-galactosidase (galactosialidosis)	2,61	2,34	chr20
PRKAA1	5562	protein kinase, AMP-activated, alpha 1 catalytic subunit	3,78	2,02	chr5
PTEN	5728	Phosphatase and tensin homolog (mutated in multiple advanced cancers 1)	2,70	2,12	chr10
RAB3B	5865	RAB3B, member RAS oncogene family	3,19	2,14	chr1
RCN3	57333	reticulocalbin 3, EF-hand calcium binding domain	3,50	2,75	chr19

Stem Cells and Development
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Table S9 : Genes overexpressed in MPC compared to hES and down-regulated in NPC compared to hES (94 genes FC>2 ; α<0.05)

Gene Symbol	Entrez Gene	Gene Title	MPC_up	NPC_down	Chromosome Number(Avadis)
REXO2	25996	REX2, RNA exonuclease 2 homolog (S. cerevisiae)	2,08	3,49	chr11
RPS27L	51065	Ribosomal protein S27-like	4,27	2,01	chr15
RRBP1	6238	ribosome binding protein 1 homolog 180kDa (dog)	2,01	3,21	chr20
RSL1D1	26156	Ribosomal L1 domain containing 1	4,27	2,18	chr16
RSU1	6251	Ras suppressor protein 1	2,56	2,11	chr10
SEC24D	9871	SEC24 related gene family, member D (S. cerevisiae)	5,55	2,89	chr4
SGK	6446	serum/glucocorticoid regulated kinase	2,20	4,88	chr6
SLC18A2	6571	Solute carrier family 18 (vesicular monoamine), member 2	2,49	2,02	chr10
SMILE	160418	SMILE protein	2,59	2,14	chr12
SP110	3431	SP110 nuclear body protein	2,20	2,15	chr2
SRPRB	58477	signal recognition particle receptor, B subunit	2,52	2,18	chr3
SSR1	6745	Signal sequence receptor, alpha (translocon-associated protein alpha)	3,33	2,24	chr6
SSR3	6747	signal sequence receptor, gamma (translocon-associated protein gamma)	7,07	2,11	chr3
STAT3	6774	signal transducer and activator of transcription 3 (acute-phase response factor)	2,17	3,17	chr17
STC2	8614	stanniocalcin 2	6,38	3,44	chr5
SURF4	6836	surfeit 4	2,15	2,70	chr9
THBS2	7058	thrombospondin 2	22,66	5,05	chr6
TMED5	50999	transmembrane emp24 protein transport domain containing 5	2,16	2,53	chr1
TRHDE	29953	thyrotropin-releasing hormone degrading enzyme	10,58	2,12	chr12
TRIM22	10346	tripartite motif-containing 22	5,53	4,12	chr11
UGCGL2	55757	UDP-glucose ceramide glucosyltransferase-like 2	4,64	2,49	chr13
USP53	54532	ubiquitin specific peptidase 53	3,74	2,10	chr4
WDR1	9948	WD repeat domain 1	2,33	2,30	chr4
WWTR1	25937	WW domain containing transcription regulator 1	6,13	2,11	chr3
ZCSL2	285381	zinc finger, CSL-type containing 2	3,05	2,68	chr3
ZYX	7791	zyxin	5,69	2,23	chr7

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Table S10 : Transcription regulators up regulated in at least one type of progenitors compared to hES

NPC vs hES (n=127)				MPC vs hES (n=118)			
Symbol	Entrez Gene Name	FC(1)	FC(2)	Symbol	Entrez Gene Name	FC(2)	FC(1)
LHX2	LIM homeobox 2	135,706	NS	SIX1	SIX homeobox 1	112.739	NS
PAX6	paired box 6	92,781	NS	CDKN2B	cyclin-dependent kinase inhibitor 2B (p15. inhibits CDK4)	45.104	NS
SIX3	SIX homeobox 3	37,877	NS	TGFB1I1	transforming growth factor beta 1 induced transcript 1	32.032	NS
SOX5	SRY (sex determining region Y)-box 5	28,582	NS	FOXD1	forkhead box D1	25.914	NS
DACH1	dachshund homolog 1 (Drosophila)	27,402	NS	MYOCD	myocardin	25.492	NS
ZIC1	Zic family member 1 (odd-paired homolog. Drosophila)	24,395	NS	SP100	SP100 nuclear antigen	24.522	NS
FOXG1	forkhead box G1	14,699	NS	CDKN2A	cyclin-dependent kinase inhibitor 2A (melanoma. p16. inhibits CDK4)	22.274	NS
TFAP2B	transcription factor AP-2 beta (activating enhancer bind	13,060	NS	PTRF	polymerase I and transcript release factor	22.227	NS
ZBTB16	zinc finger and BTB domain containing 16	12,487	NS	FLI1	Friend leukemia virus integration 1	17.02	NS
LEF1	lymphoid enhancer-binding factor 1	12,441	NS	TFAP2A	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpl	16.143	NS
EMX2	empty spiracles homeobox 2	10,305	NS	CREB3L1	cAMP responsive element binding protein 3-like 1	13.025	NS
SOX11	SRY (sex determining region Y)-box 11	8,845	-3,410	MAFF	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)	13.02	NS
ASH1L	ash1 (absent. small. or homeotic)-like (Drosophila)	8,384	NS	ELF4	E74-like factor 4 (ets domain transcription factor)	12.203	NS
MEIS1	Meis homeobox 1	8,072	NS	LMCD1	LIM and cysteine-rich domains 1	11.483	NS
SOX1	SRY (sex determining region Y)-box 1	8,008	NS	KLF9	Kruppel-like factor 9	11.186	NS
SSBP2	single-stranded DNA binding protein 2	7,891	-2,520	TWIST1	twist homolog 1 (Drosophila)	10.842	NS
PAX3	paired box 3	7,023	NS	ELK3	ELK3. ETS-domain protein (SRF accessory protein 2)	10.833	NS
ID4	inhibitor of DNA binding 4. dominant negative helix-loo	6,660	NS	RUNX2	runt-related transcription factor 2	10.679	NS
MAF	v-maf musculoaponeurotic fibrosarcoma oncogene hor	6,356	NS	GATA6	GATA binding protein 6	9.845	NS
ID2	inhibitor of DNA binding 2. dominant negative helix-loo	6,354	NS	ANKRD1	ankyrin repeat domain 1 (cardiac muscle)	9.511	-3.44
SIX6	SIX homeobox 6	6,238	NS	FOXF1	forkhead box F1	8.381	NS
ZHX1	zinc fingers and homeoboxes 1	5,853	NS	TSHZ1	teashirt zinc finger homeobox 1	6.839	NS
GATA3	GATA binding protein 3	5,798	NS	CDKN2C	cyclin-dependent kinase inhibitor 2C (p18. inhibits CDK4)	6.71	NS
HES1	hairy and enhancer of split 1. (Drosophila)	5,202	NS	BHLHE40	basic helix-loop-helix family. member e40	6.35	NS
SOX9	SRY (sex determining region Y)-box 9	5,011	NS	FOXL1	forkhead box L1	6.235	NS
ISL1	ISL LIM homeobox 1	4,911	NS	WWTR1	WW domain containing transcription regulator 1	6.132	-2.12
TSHZ1	teashirt zinc finger homeobox 1	4,756	NS	CBX4	chromobox homolog 4 (Pc class homolog. Drosophila)	6.126	NS
YAF2	YY1 associated factor 2	4,723	NS	LHX8	LIM homeobox 8	5.889	NS
BACH2	BTB and CNC homology 1. basic leucine zipper transc	4,159	NS	NFKBIZ	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibito	5.862	NS
GLI3	GLI family zinc finger 3	4,078	NS	CEBPD	CCAAT/enhancer binding protein (C/EBP). delta	5.629	NS
TLE4	transducin-like enhancer of split 4 (E(sp1) homolog. Dr	4,032	NS	TRIM22	tripartite motif-containing 22	5.529	-4.12
LHX9	LIM homeobox 9	3,814	NS	ZHX1	zinc fingers and homeoboxes 1	5.406	NS
AFF4	AF4/FMR2 family. member 4	3,760	NS	JUN	jun oncogene	5.157	NS
POU3F2	POU class 3 homeobox 2	3,760	NS	GATA2	GATA binding protein 2	5.091	NS
POU4F1	POU class 4 homeobox 1	3,698	NS	FOXP1	forkhead box P1	5.07	NS
HOXA1	homeobox A1	3,610	NS	TBX3	T-box 3	5.024	NS
FANK1	fibronectin type III and ankyrin repeat domains 1	3,561	NS	BCL6	B-cell CLL/lymphoma 6	4.766	NS
IFI16	interferon. gamma-inducible protein 16	3,556	NS	BACH1	BTB and CNC homology 1. basic leucine zipper transcription factor 1	4.612	NS
SOX3	SRY (sex determining region Y)-box 3	3,382	-5,340	TSHZ3	teashirt zinc finger homeobox 3	4.61	NS
HOXA9	homeobox A9	3,295	NS	BHLHE41	basic helix-loop-helix family. member e41	4.586	NS
KAT2B	K(lysine) acetyltransferase 2B	3,294	NS	CYLD	cylindromatosis (turban tumor syndrome)	4.523	NS
ZFPM2	zinc finger protein. multitype 2	3,086	NS	CREB3	cAMP responsive element binding protein 3	4.52	NS
SMARCC1	SWI/SNF related. matrix associated. actin dependent r	3,055	-7,610	ZBTB38	zinc finger and BTB domain containing 38	4.453	NS
ZFHX3	zinc finger homeobox 3	3,029	NS	TRPS1	trichorhinophalangeal syndrome I	4.445	NS
HSF2	heat shock transcription factor 2	2,953	NS	HOXB2	homeobox B2	4.417	NS
PIAS1	protein inhibitor of activated STAT. 1	2,918	NS	ZFHX3	zinc finger homeobox 3	4.235	NS
SOX10	SRY (sex determining region Y)-box 10	2,898	NS	ASB8	ankyrin repeat and SOCS box-containing 8	4.219	NS
LCOR	ligand dependent nuclear receptor corepressor	2,869	NS	ELL2	elongation factor. RNA polymerase II. 2	4.135	-3.13
GAS7	growth arrest-specific 7	2,851	NS	NFKB1	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1	4.133	NS
KLF11	Kruppel-like factor 11	2,850	NS	NFIC	nuclear factor I/C (CCAAT-binding transcription factor)	4.042	NS
TAF15	TAF15 RNA polymerase II. TATA box binding protein (	2,837	-3,920	DDIT3	DNA-damage-inducible transcript 3	3.987	NS
RFX3	regulatory factor X. 3 (influences HLA class II expressi	2,833	-2,830	CITED2	Cbp/p300-interacting transactivator. with Glu/Asp-rich carboxy-terminal d	3.767	NS
VEZF1	vascular endothelial zinc finger 1	2,752	NS	LZTS1	leucine zipper. putative tumor suppressor 1	3.766	NS
ARX	aristaless related homeobox	2,742	NS	SMARCA2	SWI/SNF related. matrix associated. actin dependent regulator of chroma	3.654	NS
NOTCH1	Notch homolog 1. translocation-associated (Drosophila	2,734	NS	HCFC2	host cell factor C2	3.624	NS
MAML3	mastermind-like 3 (Drosophila)	2,678	NS	TBX2	T-box 2	3.545	NS
ARNT2	aryl-hydrocarbon receptor nuclear translocator 2	2,674	NS	DCAF6	DDB1 and CUL4 associated factor 6	3.477	NS
DIP2A	DIP2 disco-interacting protein 2 homolog A (Drosophila	2,662	NS	RAI14	retinoic acid induced 14	3.362	NS
NAB1	NGFI-A binding protein 1 (EGR1 binding protein 1)	2,653	NS	TAX1BP3	Tax1 (human T-cell leukemia virus type I) binding protein 3	3.349	NS
HNRNPD	heterogeneous nuclear ribonucleoprotein D (AU-rich el	2,641	-5,950	KAT2B	K(lysine) acetyltransferase 2B	3.329	NS
LASS6	LAG1 homolog. ceramide synthase 6	2,603	-3,090	KLF7	Kruppel-like factor 7 (ubiquitous)	3.299	-2.21
MLLT10	myeloid/lymphoid or mixed-lineage leukemia (trithorax	2,594	-3,110	RBM9	RNA binding motif protein 9	3.259	NS
NFATC1	nuclear factor of activated T-cells. cytoplasmic. calcine	2,571	NS	BCL3	B-cell CLL/lymphoma 3	3.224	NS
NEO1	neogenin homolog 1 (chicken)	2,566	-2,530	BLZF1	basic leucine zipper nuclear factor 1	3.213	NS
CBFB	core-binding factor. beta subunit	2,565	NS	BMI1	BMI1 polycomb ring finger oncogene	3.203	NS
TCF12	transcription factor 12	2,554	-2,440	FOSL1	FOS-like antigen 1	3.194	NS
ARID2	AT rich interactive domain 2 (ARID. RFX-like)	2,525	-3,783	RNF6	ring finger protein (C3H2C3 type) 6	3.183	NS
SHANK3	SH3 and multiple ankyrin repeat domains 3	2,513	NS	SQSTM1	sequestosome 1	3.178	NS
BMI1	BMI1 polycomb ring finger oncogene	2,511	NS	FOXF2	forkhead box F2	3.119	NS
NCOA6	nuclear receptor coactivator 6	2,506	NS	RNF14	ring finger protein 14	3.115	NS
NEUROD1	neurogenic differentiation 1	2,498	NS	NPAS2	neuronal PAS domain protein 2	3.089	NS
LCORL	ligand dependent nuclear receptor corepressor-like	2,488	NS	NFE2L2	nuclear factor (erythroid-derived 2)-like 2	3.059	NS
FUBP1	far upstream element (FUSE) binding protein 1	2,473	NS	CALCOCO1	calcium binding and coiled-coil domain 1	3.051	NS
CAND1	cullin-associated and neddylation-dissociated 1	2,441	NS	RB1	retinoblastoma 1	2.972	NS
HDAC6	histone deacetylase 6	2,431	NS	TCEAL1	transcription elongation factor A (SII)-like 1	2.944	NS
ZNF193	zinc finger protein 193	2,418	NS	SATB2	SATB homeobox 2	2.941	NS
ZNF141	zinc finger protein 141	2,375	-2,580	SIRT2	sirtuin (silent mating type information regulation 2 homolog) 2 (S. cerevis	2.868	NS
POLR2J2	polymerase (RNA) II (DNA directed) polypeptide J2	2,343	NS	GLIS1	GLIS family zinc finger 1	2.866	NS
CEP110	centrosomal protein 110kDa	2,316	NS	RELA	v-rel reticuloendotheliosis viral oncogene homolog A (avian)	2.842	NS
UHRF1	ubiquitin-like with PHD and ring finger domains 1	2,288	NS	TMF1	TATA element modulatory factor 1	2.816	NS
HMBOX1	homeobox containing 1	2,281	NS	HOXB7	homeobox B7	2.761	NS
CNOT7	CCR4-NOT transcription complex. subunit 7	2,280	-2,440	EID1	EP300 interacting inhibitor of differentiation 1	2.731	NS
EPC1	enhancer of polycomb homolog 1 (Drosophila)	2,244	NS	HBP1	HMG-box transcription factor 1	2.713	NS
MLL3	myeloid/lymphoid or mixed-lineage leukemia 3	2,242	NS	DRAP1	DR1-associated protein 1 (negative cofactor 2 alpha)	2.702	NS
OTX2	orthodenticle homeobox 2	2,238	-109,060	KLF2	Kruppel-like factor 2 (lung)	2.681	NS
SMAD5	SMAD family member 5	2,220	NS	PBXIP1	pre-B-cell leukemia homeobox interacting protein 1	2.667	NS
MSRB2	methionine sulfoxide reductase B2	2,215	NS	ZHX3	zinc fingers and homeoboxes 3	2.658	NS
TFDP2	transcription factor Dp-2 (E2F dimerization partner 2)	2,214	-9,050	MAGED1	melanoma antigen family D. 1	2.619	NS
BTG1	B-cell translocation gene 1. anti-proliferative	2,194	NS	ANKRA2	ankyrin repeat. family A (RFXANK-like). 2	2.578	NS
TARDBP	TAR DNA binding protein	2,190	-2,330	STAT6	signal transducer and activator of transcription 6. interleukin-4 induced	2.485	NS
GRHL1	grainyhead-like 1 (Drosophila)	2,147	NS	LRRFIP1	leucine rich repeat (in FLII) interacting protein 1	2.479	NS
MED6	mediator complex subunit 6	2,146	-2,260	TOX2	TOX high mobility group box family member 2	2.457	NS
FOXO3	forkhead box O3	2,138	NS	MEF2A	myocyte enhancer factor 2A	2.453	-2.22
ATRX	alpha thalassemia/mental retardation syndrome X-linke	2,132	-6,067	NCOA3	nuclear receptor coactivator 3	2.428	NS
RRN3	RRN3 RNA polymerase I transcription factor homolog	2,131	NS	FOXJ2	forkhead box J2	2.424	NS
ZNF274	zinc finger protein 274	2,124	NS	HIVEP3	human immunodeficiency virus type I enhancer binding protein 3	2.399	NS
RERE	arginine-glutamic acid dipeptide (RE) repeats	2,106	-2,680	HLX	H2.0-like homeobox	2.347	NS
PHTF1	putative homeodomain transcription factor 1	2,090	NS	NKX3-1	NK3 homeobox 1	2.345	NS
FAM172A	family with sequence similarity 172. member A	2,087	NS	ETV5	ets variant 5	2.344	NS
MECP2	methyl CpG binding protein 2 (Rett syndrome)	2,087	NS	ELF1	E74-like factor 1 (ets domain transcription factor)	2.321	NS
LASS5	LAG1 homolog. ceramide synthase 5	2,083	NS	GTF2H1	general transcription factor IIH. polypeptide 1. 62kDa	2.295	NS
KANK2	KN motif and ankyrin repeat domains 2	2,080	NS	TRIP11	thyroid hormone receptor interactor 11	2.29	NS
CUX1	cut-like homeobox 1	2,079	NS	IRF9	interferon regulatory factor 9	2.211	NS
ETS1	v-ets erythroblastosis virus E26 oncogene homolog 1 (	2,073	NS	OSTF1	osteoclast stimulating factor 1	2.208	NS
ZNF236	zinc finger protein 236	2,073	NS	ANKLE2	ankyrin repeat and LEM domain containing 2	2.188	NS
FOXN3	forkhead box N3	2,070	NS	JAZF1	JAZF zinc finger 1	2.184	-4.31
SREBF1	sterol regulatory element binding transcription factor 1	2,056	-2,480	TAF13	TAF13 RNA polymerase II. TATA box binding protein (TBP)-associated fa	2.177	NS
NCOR1	nuclear receptor co-repressor 1	2,053	NS	STAT3	signal transducer and activator of transcription 3 (acute-phase response f	2.175	-3.17
SMARCE1	SWI/SNF related. matrix associated. actin dependent r	2,053	-2,850	ETV6	ets variant 6	2.174	NS
KIDINS220	kinase D-interacting substrate. 220kDa	2,051	NS	RBCK1	RanBP-type and C3HC4-type zinc finger containing 1	2.157	NS
SRA1	steroid receptor RNA activator 1	2,050	NS	SERTAD1	SERTA domain containing 1	2.14	NS
MKL2	MKL/myocardin-like 2	2,044	NS	RBM39	RNA binding motif protein 39	2.137	NS
SCMH1	sex comb on midleg homolog 1 (Drosophila)	2,043	NS	BCL10	B-cell CLL/lymphoma 10	2.119	NS
ZNF131	zinc finger protein 131	2,039	-3,800	STAT1	signal transducer and activator of transcription 1. 91kDa	2.116	NS
HIF1A	hypoxia inducible factor 1. alpha subunit (basic helix-lo	2,036	NS	MEF2D	myocyte enhancer factor 2D	2.115	NS
MYEF2	myelin expression factor 2	2,036	-3,200	STAT2	signal transducer and activator of transcription 2. 113kDa	2.106	NS
ARID1B	AT rich interactive domain 1B (SWI1-like)	2,017	-3,158				
TCEB1	transcription elongation factor B (SIII). polypeptide 1 (1	2,017	NS				
PRDM2	PR domain containing 2. with ZNF domain	2,016	NS				
MZF1	myeloid zinc finger 1	2,014	NS				
JUND	jun D proto-oncogene	2,012	NS				
NAB2	NGFI-A binding protein 2 (EGR1 binding protein 2)	2,009	NS				
PAWR	PRKC. apoptosis. WT1. regulator	2,008	NS				
CREM	cAMP responsive element modulator	2,007	NS				
BTAF1	BTAF1 RNA polymerase II. B-TFIID transcription facto	2,000	NS				

IPA knowledgde data bank_Nervous System and development
IPA knowledgde data bank_Connective tissue development
FC (1) : Fold Change NCAM-NPC vs hES ; FC (2) Fold change CD73-MPC vs hES. NS : no significant modulation