Table S7: Gene ontology analysis for the Shagya Arabians

Term	Bonferroni adjusted p-value	N genes	Genes
GO biological process			
regulation of transcription initiation by RNA polymerase II (GO:0060260)	3.38E-02	5	*MED24, THRA, TAF12, MED13, MED1*
GO molecular function			
transcription factor binding (GO:0008134)	6.53E-03	14	*RNF25, MED24, THRA, STK36, DGKQ, CTBP1, RARA, TAF12, SMARCE1, MTDH, MED13, CREB1, MED1, NR1D1*
binding (GO:0005488)	4.39E-03	128	*CDK12, CLIP1, UBR3, STAC2, CCR7, SSB, DDX55, KNTC1, RNF25, MTMR4, IKZF3, PPP1R8, IL31, MED24, CCR3, AK3, TEX14, LOC100068349, TOP2A, RHOF, FGR, RPL19, GEM, THRA, TRNAU1AP, RB1CC1, DNAJC8, POP1, WIPF2, LAPTM4B, PDP1, SPATA6L, NKX1-1, FGFRL1, YTHDF2, IGFBP4, DGKE, NOG, MSI2, CSF3, LPO, GAK, STK36, DGKQ, ATP5IF1, CTBP1, RARA, TAF12, CDC37L1, ALKAL1, METTL5, KRT27, AKAP1, PDE6B, OPRD1, RILPL1, SMARCE1, MYO3B, SESN2, CDC6, DNAH10, MAEA, PXDNL, MATN2, XXYLT1, PRKAG3, TSPOAP1, STK3, GLIS3, CCRL2, CASC3, BRIP1, GTF2H3, MSL1, NBAS, PPM1E, CCR2, TJP1, HPD, MPO, LRRC43, HSF5, RAD51C, RNF212, SETD1B, SLC1A1, GSDMA, MTDH, MED13, CREB1, RILPL2, RAB42, TRIM25, GSDMB, LTF, SNRNP35, RAD54B, MED1, MYL5, STX12, UVSSA, SUPT4H1, METTL8, PHACTR4, ATP6V0A2, ESRP1, ZNF142, CDH17, NR1D1, ZCCHC8, RBM12B, MLXIP, LTF, EIF2B1, EYA3, GMEB1, BCS1L, SMPDL3B, SPON2, ARL5C, RPL30, COIL, RNF43, CYP27A1, LOC100147364, RPA2, CPLX1, ST18*
GO cellular component			
intermediate filament (GO:0005882)	4.15E-02	7	*KRT24, KRT25, KRT28, KRT10B, KRT27, KRT222, KRT26*
organelle (GO:0043226)	4.33E-04	128	*CDK12, CLIP1, KRT24, CCR7, SSB, DDX55, KNTC1, RNF25, IKZF3, PPP1R8, MED24, AK3, TEX14, LOC100068349, TOP2A, FGR, SLC49A3, KRT25, RPL19, TCTN2, THRA, TRNAU1AP, RB1CC1, DNAJC8, ERC2, POP1, TMEM67, IFI6, LAPTM4B, PDP1, SPATA6L, SNTG1, NKX1-1, KRT28, YTHDF2, ORMDL3, DIABLO, PIGG, DGKE, MSI2, GAK, STK36, DGKQ, ATP5IF1, CTBP1, RARA, TAF12, TMED2, KMT5A, METTL5, KRT10B, TMEM175, KRT27, AKAP1, PDE6B, RCL1, OPRD1, RILPL1, SMARCE1, MYO3B, SESN2, THEMIS2, CDC6, B3GNT4, DNAH10, MAEA, XXYLT1, PRKAG3, TSPOAP1, DPY19L4, STK3, GLIS3, CASC3, BRIP1, GTF2H3, TRIQK, MSL1, NBAS, PPM1E, PCGF3, TJP1, AHDC1, HPD, MPO, LRRC43, HSF5, RAD51C, RNF212, SETD1B, SLC1A1, MTDH, MED13, CREB1, RILPL2, VPS33A, LTF, SNRNP35, RAD54B, MED1, STX12, UVSSA, SUPT4H1, METTL8, ATP6V0A2, ESRP1, ZNF142, VIRMA, NR1D1, ZCCHC8, KRT222, RBM12B, MLXIP, LTF, EYA3, DCAF17, FAM76A, GMEB1, BCS1L, ARL5C, KRT26, RPL30, COIL, CYP27A1, LOC100147364, RPA2, ST18, BCL7A, PSMD9*
intracellular organelle (GO:0043229)	1.47E-03	124	*CDK12, CLIP1, KRT24, CCR7, SSB, DDX55, KNTC1, RNF25, IKZF3, PPP1R8, MED24, AK3, TEX14, LOC100068349, TOP2A, FGR, SLC49A3, KRT25, RPL19, THRA, TRNAU1AP, RB1CC1, DNAJC8, ERC2, POP1, IFI6, LAPTM4B, PDP1, SNTG1, NKX1-1, KRT28, YTHDF2, ORMDL3, DIABLO, PIGG, DGKE, MSI2, GAK, STK36, DGKQ, ATP5IF1, CTBP1, RARA, TAF12, TMED2, KMT5A, METTL5, KRT10B, TMEM175, KRT27, AKAP1, RCL1, OPRD1, RILPL1, SMARCE1, MYO3B, SESN2, THEMIS2, CDC6, B3GNT4, DNAH10, MAEA, XXYLT1, PRKAG3, TSPOAP1, DPY19L4, STK3, GLIS3, CASC3, BRIP1, GTF2H3, TRIQK, MSL1, NBAS, PPM1E, PCGF3, TJP1, AHDC1, HPD, MPO, LRRC43, HSF5, RAD51C, RNF212, SETD1B, SLC1A1, MTDH, MED13, CREB1, RILPL2, VPS33A, LTF, SNRNP35, RAD54B, MED1, STX12, UVSSA, SUPT4H1, METTL8, ATP6V0A2, ESRP1, ZNF142, VIRMA, NR1D1, ZCCHC8, KRT222, RBM12B, MLXIP, LTF, EYA3, DCAF17, FAM76A, GMEB1, BCS1L, ARL5C, KRT26, RPL30, COIL, CYP27A1, LOC100147364, RPA2, ST18, BCL7A, PSMD9*
membrane-bounded organelle (GO:0043227)	2.52E-02	113	*CDK12, CLIP1, CCR7, SSB, DDX55, RNF25, IKZF3, PPP1R8, MED24, AK3, LOC100068349, TOP2A, SLC49A3, TCTN2, THRA, TRNAU1AP, RB1CC1, DNAJC8, POP1, TMEM67, IFI6, LAPTM4B, PDP1, SPATA6L, NKX1-1, YTHDF2, ORMDL3, DIABLO, PIGG, DGKE, MSI2, GAK, STK36, DGKQ, ATP5IF1, CTBP1, RARA, TAF12, TMED2, KMT5A, METTL5, TMEM175, AKAP1, PDE6B, RCL1, OPRD1, RILPL1, SMARCE1, SESN2, THEMIS2, CDC6, B3GNT4, DNAH10, MAEA, XXYLT1, PRKAG3, TSPOAP1, DPY19L4, STK3, GLIS3, CASC3, BRIP1, GTF2H3, TRIQK,*

			NBAS, PPM1E, PCGF3, TJP1, AHDC1, HPD, MPO, LRRC43, HSF5, RAD51C, RNF212, SETD1B, SLC1A1, MTDH, MED13, CREB1, RILPL2, VPS33A, LTF, SNRNP35, RAD54B, MED1, STX12, UVSSA, SUPT4H1, METTL8, ATP6V0A2, ESRP1, ZNF142, VIRMA, NR1D1, ZCCHC8, RBM12B, MLXIP, LTF, EYA3, DCAF17, FAM76A, GMEB1, BCS1L, ARL5C, RPL30, COIL, CYP27A1, LOC100147364, RPA2, ST18, BCL7A, PSMD9
intracellular anatomical structure (GO:0005622)	5.79E-05	142	*CDK12, CLIP1, KRT24, UBR3, CCR7, SSB, DDX55, KNTC1, RNF25, MTMR4, IKZF3, PPP1R8, MED24, CCR3, AK3, TEX14, LOC100068349, TOP2A, RHOF, FGR, SLC49A3, KRT25, RPL19, THRA, TRNAU1AP, RB1CC1, DNAJC8, ERC2, POP1, IFI6, LAPTM4B, PDP1, SNTG1, RCC1, NKX1-1, KRT28, YTHDF2, ORMDL3, DIABLO, PIGG, DGKE, MSI2, LPO, GAK, STK36, DGKQ, ATP5IF1, CTBP1, RARA, TAF12, TMED2, KMT5A, CDC37L1, METTL5, KRT10B, TMEM175, KRT27, AKAP1, RCL1, OPRD1, RILPL1, SMARCE1, MYO3B, SESN2, PSMD3, THEMIS2, CDC6, B3GNT4, DNAH10, MAEA, XXYLT1, PRKAG3, TSPOAP1, DPY19L4, STK3, GLIS3, CCRL2, CASC3, BRIP1, GTF2H3, TRIQK, MSL1, NBAS, PPM1E, PCGF3, CCR2, TJP1, AHDC1, HPD, MPO, LRRC43, HSF5, RAD51C, RNF212, SETD1B, SLC1A1, GSDMA, MTDH, MED13, CREB1, RILPL2, METTL21A, VPS33A, TRIM25, LTF, SNRNP35, RAD54B, MED1, MYL5, STX12, UVSSA, SUPT4H1, METTL8, PHACTR4, ATP6V0A2, ESRP1, ZNF142, VIRMA, NR1D1, PCMTD1, ZCCHC8, KRT222, RBM12B, MLXIP, LTF, EIF2B1, EYA3, DCAF17, FAM76A, GMEB1, BCS1L, ARL5C, KRT26, RPL30, COIL, CYP27A1, LOC100147364, RPA2, CPLX1, ST18, BCL7A, PSMD9*
cellular anatomical entity (GO:0110165)	3.36E-03	173	*CDK12, CLIP1, KRT24, UBR3, STAC2, CCR7, SSB, DDX55, KNTC1, COL22A1, RNF25, MTMR4, IKZF3, PPP1R8, IL31, MED24, CCR3, AK3, TEX14, LOC100068349, TOP2A, RHOF, FGR, SLC49A3, OPCML, KRT25, RPL19, GEM, TCTN2, THRA, TRNAU1AP, RB1CC1, DNAJC8, ERC2, POP1, TMEM67, IFI6, LAPTM4B, PDP1, SPATA6L, SNTG1, RCC1, NKX1-1, KRT28, FGFRL1, YTHDF2, IGFBP4, ORMDL3, DIABLO, PIGG, DGKE, NOG, MSI2, CSF3, LPO, GAK, STK36, DGKQ, ATP5IF1, CTBP1, RARA, TAF12, TMED2, KMT5A, CDC37L1, ALKAL1, METTL5, KRT10B, TMEM175, KRT27, AKAP1, PDE6B, RCL1, OPRD1, RILPL1, SMARCE1, MYO3B, SESN2, PSMD3, THEMIS2, CDC6, B3GNT4, DNAH10, MAEA, PXDNL, SLC26A1, MATN2, XXYLT1, PRKAG3, TSPOAP1, DPY19L4, STK3, GLIS3, CCRL2, CASC3, BRIP1, GTF2H3, TRIQK, MSL1, NBAS, CACNB1, PPM1E, PCGF3, CCR2, TNS4, TJP1, LRRC3C, AHDC1, HPD, MPO, LRRC43, HSF5, RAD51C, RNF212, SETD1B, XKR8, SLC1A1, GSDMA, MTDH, MED13, CREB1, RILPL2, METTL21A, VPS33A, TRIM25, GSDMB, LTF, SNRNP35, RAD54B, MED1, MYL5, STX12, UVSSA, SUPT4H1, METTL8, PHACTR4, ATP6V0A2, ESRP1, ZNF142, VIRMA, NTM, CDH17, NR1D1, PCMTD1, ZCCHC8, KRT222, RBM12B, MLXIP, LTF, EIF2B1, EYA3, DCAF17, FAM76A, GMEB1, BCS1L, KCNS2, SMPDL3B, NIPAL2, SPON2, ARL5C, KRT26, RPL30, RAPGEFL1, COIL, RNF43, CYP27A1, LOC100147364, PLXDC1, RPA2, CPLX1, ST18, BCL7A, PSMD9*