

## Additional file 8

Table S2: Overview of genes in the 4Mbp range of BTA6's top SNP in the case control on the medium density analysis: ARS-BFGL-NGS-58762 on position 43,713,187

| <b>Ensembl gene ID</b> | <b>Name</b>     | <b>Start position</b> | <b>End position</b> |
|------------------------|-----------------|-----------------------|---------------------|
| ENSBTAG00000042427     | <i>RF00026</i>  | 42,431,795            | 42,431,898          |
| ENSBTAG00000004653     | <i>ADGRA3</i>   | 43,436,544            | 43,531,420          |
| ENSBTAG00000020363     | <i>GBA3</i>     | 43,675,600            | 43,863,550          |
| ENSBTAG00000042453     | <i>RF00026</i>  | 44,553,810            | 44,553,916          |
| ENSBTAG00000033327     |                 | 44,668,706            | 44,669,207          |
| ENSBTAG00000017024     | <i>PPARGC1A</i> | 44,854,113            | 44,960,668          |
| ENSBTAG00000043366     | <i>RF00026</i>  | 45,527,603            | 45,527,709          |
| ENSBTAG00000008896     | <i>DHX15</i>    | 45,629,617            | 45,683,587          |

Table S3: Overview of genes in the 4Mbp range of BTA15's top SNP in the case control on the medium density analysis: Hapmap54259-rs29018653 on position 67,816,375

| <b>Ensembl gene ID</b> | <b>Name</b>         | <b>Start position</b> | <b>End position</b> |
|------------------------|---------------------|-----------------------|---------------------|
| ENSBTAG00000012460     | <i>ELF5</i>         | 65,824,442            | 65,854,386          |
| ENSBTAG00000017150     | <i>EHF</i>          | 65,991,132            | 66,030,964          |
| ENSBTAG00000018257     | <i>APIP</i>         | 66,207,587            | 66,231,698          |
| ENSBTAG00000018261     | <i>PDHX</i>         | 66,231,837            | 66,307,403          |
| ENSBTAG00000044322     | <i>bta-mir-1343</i> | 66,264,848            | 66,264,925          |
| ENSBTAG00000011578     | <i>CD44</i>         | 66,454,331            | 66,541,790          |
| ENSBTAG00000012628     | <i>SLC1A2</i>       | 66,580,653            | 66,637,083          |
| ENSBTAG00000012630     | <i>PAMR1</i>        | 66,754,734            | 66,832,246          |
| ENSBTAG00000047083     | <i>FJX1</i>         | 66,929,952            | 66,930,443          |
| ENSBTAG00000037389     | <i>TRIM44</i>       | 66,987,987            | 67,099,792          |
| ENSBTAG00000044158     | <i>LDLRAD3</i>      | 67,240,027            | 67,518,041          |
| ENSBTAG00000019045     | <i>COMMD9</i>       | 67,563,703            | 67,576,723          |
| ENSBTAG00000021029     | <i>PRR5L</i>        | 67,661,945            | 67,741,048          |
| ENSBTAG00000036009     | <i>TRAF6</i>        | 67,768,374            | 67,789,469          |
| ENSBTAG00000040293     | <i>RAG1</i>         | 67,827,233            | 67,830,364          |
| ENSBTAG00000031309     | <i>RAG2</i>         | 67,841,773            | 67,849,540          |
| ENSBTAG00000021611     | <i>C15H11orf74</i>  | 67,844,540            | 67,911,151          |
| ENSBTAG00000044849     | <i>RF00026</i>      | 67,874,695            | 67,874,766          |
| ENSBTAG00000001623     |                     | 68,996,828            | 69,000,079          |

Table S4: Overview of genes in the 4Mbp range of BTA6's top SNP in the quantitative analysis on Lesion Extent on the medium density data: BTB-00253074 on position 43,811,863

| <b>Ensembl gene ID</b> | <b>Name</b>     | <b>Start position</b> | <b>End position</b> |
|------------------------|-----------------|-----------------------|---------------------|
| ENSBTAG00000042427     | <i>RF00026</i>  | 42,431,795            | 42,431,898          |
| ENSBTAG00000004653     | <i>ADGRA3</i>   | 43,436,544            | 43,531,420          |
| ENSBTAG00000020363     | <i>GBA3</i>     | 43,675,600            | 43,863,550          |
| ENSBTAG00000042453     | <i>RF00026</i>  | 44,553,810            | 44,553,916          |
| ENSBTAG00000033327     |                 | 44,668,706            | 44,669,207          |
| ENSBTAG00000017024     | <i>PPARGC1A</i> | 44,854,113            | 44,960,668          |
| ENSBTAG00000043366     | <i>RF00026</i>  | 45,527,603            | 45,527,709          |
| ENSBTAG00000008896     | <i>DHX15</i>    | 45,629,617            | 45,683,587          |

Table S5: Overview of genes in the 4Mbp range of BTA6's top SNP in the case control analysis on high density imputed data: BOVINEHD0600034679 on position 42,861,985

| <b>Ensembl gene ID</b> | <b>Name</b>   | <b>Start position</b> | <b>End position</b> |
|------------------------|---------------|-----------------------|---------------------|
| ENSBTAG00000005108     | SLIT2         | 41,236,589            | 41,640,789          |
| ENSBTAG00000029783     | bta-mir-218-1 | 41,545,029            | 41,545,138          |
| ENSBTAG00000033351     | PACRGL        | 41,685,691            | 41,707,024          |
| ENSBTAG00000047743     | KCNIP4        | 41,709,362            | 43,021,626          |
| ENSBTAG00000042427     | RF00026       | 42,431,795            | 42,431,898          |
| ENSBTAG00000004653     | ADGRA3        | 43,436,544            | 43,531,420          |
| ENSBTAG00000020363     | GBA3          | 43,675,600            | 43,863,550          |
| ENSBTAG00000042453     | RF00026       | 44,553,810            | 44,553,916          |
| ENSBTAG00000033327     |               | 44,668,706            | 44,669,207          |

Table S6: Overview of genes in the 4Mbp range of BTA11's top SNP in the case control analysis on high density imputed data: BOVINEHD1100017534 on position 61,865,790

| <b>Ensembl gene ID</b> | <b>Name</b>    | <b>Start position</b> | <b>End position</b> |
|------------------------|----------------|-----------------------|---------------------|
| ENSBTAG00000013254     | <i>XPO1</i>    | 60,068,221            | 60,109,922          |
| ENSBTAG00000039218     |                | 60,268,166            | 60,268,762          |
| ENSBTAG00000009290     | <i>FAM161A</i> | 60,352,576            | 60,381,305          |
| ENSBTAG00000004531     | <i>CCT4</i>    | 60,397,422            | 60,410,035          |
| ENSBTAG00000019867     | <i>COMMD1</i>  | 60,427,663            | 60,598,437          |
| ENSBTAG00000018046     | <i>B3GNT2</i>  | 60,654,634            | 60,687,730          |
| ENSBTAG00000000899     | <i>TMEM17</i>  | 60,934,735            | 60,942,371          |
| ENSBTAG00000044173     | <i>EHBP1</i>   | 61,117,376            | 61,472,058          |
| ENSBTAG00000006760     | <i>OTX1</i>    | 61,479,110            | 61,482,379          |
| ENSBTAG00000023318     |                | 61,716,757            | 61,717,260          |
| ENSBTAG00000005151     | <i>WDPCP</i>   | 61,759,950            | 61,969,748          |
| ENSBTAG00000019295     | <i>MDH1</i>    | 61,970,467            | 61,994,479          |
| ENSBTAG00000000111     | <i>UGP2</i>    | 62,244,354            | 62,299,938          |
| ENSBTAG00000000115     | <i>VPS54</i>   | 62,301,309            | 62,377,281          |
| ENSBTAG00000020865     | <i>PELI1</i>   | 62,471,609            | 62,528,075          |
| ENSBTAG00000000156     | <i>LGALSL</i>  | 62,812,719            | 62,817,829          |
| ENSBTAG00000009299     | <i>AFTPH</i>   | 62,911,414            | 62,951,512          |
| ENSBTAG00000007793     | <i>SERTAD2</i> | 62,992,908            | 62,993,855          |
| ENSBTAG00000046117     |                | 63,290,422            | 63,395,507          |
| ENSBTAG00000007763     | <i>SLC1A4</i>  | 63,337,655            | 63,367,589          |
| ENSBTAG00000016717     | <i>CEP68</i>   | 63,413,128            | 63,424,655          |
| ENSBTAG00000016720     | <i>RAB1A</i>   | 63,429,725            | 63,458,565          |
| ENSBTAG00000009761     | <i>ACTR2</i>   | 63,552,997            | 63,591,980          |
| ENSBTAG00000019456     | <i>SPRED2</i>  | 63,639,742            | 63,672,178          |

Table S7: Overview of genes in the 4Mbp range of BTA6's top SNP in the quantitative analysis on Lesion Extent on high density imputed data: BOVINEHD0600013002 on position 47,540,677

| <b>Ensembl gene ID</b> | <b>Name</b>    | <b>Start position</b> | <b>End position</b> |
|------------------------|----------------|-----------------------|---------------------|
| ENSBTAG00000008896     | <i>DHX15</i>   | 45,629,617            | 45,683,587          |
| ENSBTAG00000043744     | <i>RF00001</i> | 45,845,700            | 45,845,802          |
| ENSBTAG00000013980     | <i>SOD3</i>    | 45,927,554            | 45,930,819          |
| ENSBTAG00000021940     | <i>CCDC149</i> | 45,940,147            | 46,057,441          |
| ENSBTAG00000017390     | <i>LGI2</i>    | 46,127,372            | 46,155,777          |
| ENSBTAG00000014616     | <i>SEPSECS</i> | 46,251,864            | 46,286,668          |
| ENSBTAG00000006492     | <i>PI4K2B</i>  | 46,355,300            | 46,391,439          |
| ENSBTAG00000007240     | <i>ZCCHC4</i>  | 46,415,046            | 46,464,861          |
| ENSBTAG00000000646     | <i>ANAPC4</i>  | 46,471,813            | 46,504,926          |
| ENSBTAG00000028675     | <i>RF00001</i> | 46,501,972            | 46,502,082          |
| ENSBTAG00000042665     | <i>RF00026</i> | 46,721,279            | 46,721,385          |
| ENSBTAG00000001545     | <i>SLC34A2</i> | 46,724,553            | 46,749,777          |
| ENSBTAG00000002299     | <i>SEL1L3</i>  | 46,791,165            | 46,881,531          |
| ENSBTAG00000003897     | <i>SMIM20</i>  | 46,975,914            | 46,988,666          |
| ENSBTAG00000045268     |                | 47,184,385            | 47,184,455          |
| ENSBTAG00000003602     | <i>RBPJ</i>    | 47,318,340            | 47,429,147          |
| ENSBTAG00000043333     | <i>RF00026</i> | 47,351,713            | 47,351,816          |
| ENSBTAG00000004988     | <i>CCKAR</i>   | 47,468,324            | 47,479,538          |
| ENSBTAG00000033214     | <i>TBC1D19</i> | 47,570,062            | 47,723,788          |
| ENSBTAG00000019353     | <i>STIM2</i>   | 47,941,559            | 48,006,406          |
| ENSBTAG00000047735     |                | 48,036,646            | 48,036,732          |
| ENSBTAG00000018885     |                | 48,314,930            | 48,315,299          |
| ENSBTAG00000045570     |                | 48,464,280            | 48,464,799          |

Table S8: Overview of genes in the 4Mbp range of BTA15's top SNP in the quantitative analysis on Lesion Extent on high density imputed data: BOVINEHD1500020245 on position 70,129,820

| <b>Ensembl gene ID</b> | <b>Name</b>    | <b>Start position</b> | <b>End position</b> |
|------------------------|----------------|-----------------------|---------------------|
| ENSBTAG00000001623     |                | 68,996,828            | 69,000,079          |
| ENSBTAG000000042407    | <i>RF00026</i> | 69,877,187            | 69,877,293          |
| ENSBTAG000000029461    | <i>RF00001</i> | 71,047,556            | 71,047,665          |
| ENSBTAG000000007324    | <i>LRRC4C</i>  | 71,243,845            | 71,245,767          |

Table S9: Overview of genes in the 4Mbp range of BTA24's top SNP in the quantitative analysis on Lesion Extent on high density imputed data: BOVINEHD2400015598 on position 54,644,915

| <b>Ensembl gene ID</b> | <b>Name</b>        | <b>Start position</b> | <b>End position</b> |
|------------------------|--------------------|-----------------------|---------------------|
| ENSBTAG00000037457     | <i>MBD2</i>        | 54,044,363            | 54,093,578          |
| ENSBTAG00000009129     | <i>POLI</i>        | 54,154,068            | 54,178,071          |
| ENSBTAG00000008168     | <i>STARD6</i>      | 54,186,472            | 54,203,204          |
| ENSBTAG00000008169     | <i>C24H18orf54</i> | 54,209,587            | 54,228,633          |
| ENSBTAG00000046901     |                    | 54,256,859            | 54,258,626          |
| ENSBTAG00000042220     | <i>RF00026</i>     | 54,290,445            | 54,290,551          |
| ENSBTAG00000013871     |                    | 54,470,149            | 54,474,339          |
| ENSBTAG00000002788     | <i>RAB27B</i>      | 54,544,871            | 54,715,264          |
| ENSBTAG00000008158     | <i>CCDC68</i>      | 54,728,527            | 54,786,445          |
| ENSBTAG00000016462     | <i>TCF4</i>        | 55,056,433            | 55,435,276          |
| ENSBTAG00000045116     | <i>RF00004</i>     | 55,115,179            | 55,115,351          |
| ENSBTAG00000015731     | <i>TXNL1</i>       | 56,404,067            | 56,446,678          |