Figure S1. Heatmap of the expression profiles for the top 50 upregulated and downregulated differentially expressed genes in GSE55092. The colours represent the expression level of the genes, and the higher the expression level, the darker the colour. Red, upregulated; green, downregulated.
| Accession no. | Source            | HBV        | Sex   | Age (years) |
|--------------|-------------------|------------|-------|-------------|
| GSM437457    | Non-tumor tissue  | Positive   | Male  | 50          |
| GSM437458    | HCC tissue        | Positive   | Male  | 50          |
| GSM437459    | HCC tissue        | Positive   | Male  | 49          |
| GSM437462    | Non-tumor tissue  | Positive   | Female| 30          |
| GSM437463    | Non-tumor tissue  | Positive   | Male  | 56          |
| GSM437464    | HCC tissue        | Positive   | Male  | 56          |
| GSM437466    | Non-tumor tissue  | Positive   | Male  | 52          |
| GSM437467    | HCC tissue        | Positive   | Male  | 52          |
| GSM437468    | HCC tissue        | Positive   | Male  | 59          |
| GSM437473    | Non-tumor tissue  | Positive   | Male  | 60          |
| GSM437474    | HCC tissue        | Positive   | Male  | 60          |
| GSM437478    | HCC tissue        | Positive   | Male  | 64          |
| GSM437479    | Non-tumor tissue  | Positive   | Male  | 50          |
| GSM437480    | Non-tumor tissue  | Positive   | Male  | 48          |
| GSM437481    | Non-tumor tissue  | Positive   | Male  | 52          |
| GSM437486    | Non-tumor tissue  | Positive   | Female| 48          |
| GSM437487    | HCC tissue        | Positive   | Male  | 69          |
| GSM437490    | Non-tumor tissue  | Positive   | Male  | 65          |
| GSM437491    | HCC tissue        | Positive   | Male  | 66          |
| GSM437492    | Non-tumor tissue  | Positive   | Male  | 45          |
| GSM437493    | HCC tissue        | Positive   | Male  | 45          |
| GSM1523339   | HCC tissue        | Positive   | Male  | 35          |
| GSM1523352   | HCC tissue        | Positive   | Female| 21          |
| GSM1523353   | HCC tissue        | Positive   | Female| 26          |
| GSM1523354   | HCC tissue        | Positive   | Male  | 50          |
| GSM1523355   | HCC tissue        | Positive   | Male  | 59          |
| GSM1523359   | HCC tissue        | Positive   | Male  | 40          |
| GSM1523361   | HCC tissue        | Positive   | Female| 61          |
| GSM1523371   | HCC tissue        | Positive   | Male  | 26          |
| GSM1523415   | HCC tissue        | Positive   | Male  | 64          |
| GSM1523419   | HCC tissue        | Positive   | Male  | 44          |
| GSM2226280   | Non-tumor tissue  | Positive   | Male  | 42          |
| GSM2226281   | Non-tumor tissue  | Positive   | Male  | 56          |
| GSM2226282   | Non-tumor tissue  | Positive   | Female| 54          |
| GSM2226283   | Non-tumor tissue  | Positive   | Female| 41          |
| GSM2226284   | Non-tumor tissue  | Positive   | Female| 37          |
| GSM2226285   | Non-tumor tissue  | Positive   | Female| 33          |
| GSM2226286   | Non-tumor tissue  | Positive   | Male  | 52          |
| GSM2226287   | Non-tumor tissue  | Positive   | Male  | 35          |
| GSM2226288   | Non-tumor tissue  | Positive   | Male  | 43          |
| GSM2226289   | Non-tumor tissue  | Positive   | Male  | 44          |
| GSM2226290   | Non-tumor tissue  | Positive   | Female| 35          |
| GSM2226291   | Non-tumor tissue  | Positive   | Male  | 58          |
| GSM2226292   | Non-tumor tissue  | Positive   | Male  | 43          |
| GSM2226293   | Non-tumor tissue  | Positive   | Male  | 34          |
| GSM2226294   | Non-tumor tissue  | Positive   | Male  | 34          |
| GSM2226295   | Non-tumor tissue  | Positive   | Male  | 58          |
| GSM2226296   | Non-tumor tissue  | Positive   | Male  | 48          |
| GSM2226297   | Non-tumor tissue  | Positive   | Female| 48          |
| GSM2226298   | Non-tumor tissue  | Positive   | Female| 33          |
| GSM2226299   | Non-tumor tissue  | Positive   | Male  | 37          |
| GSM2226300   | Non-tumor tissue  | Positive   | Male  | 59          |
| GSM2226301   | Non-tumor tissue  | Positive   | Female| 37          |
| GSM2226302   | Non-tumor tissue  | Positive   | Female| 64          |
| GSM2226303   | Non-tumor tissue  | Positive   | Female| 37          |
| GSM2226304   | Non-tumor tissue  | Positive   | Male  | 45          |
| GSM2226305   | Non-tumor tissue  | Positive   | Female| 40          |
| GSM2226306   | Non-tumor tissue  | Positive   | Female| 40          |
| GSM2226307   | Non-tumor tissue  | Positive   | Male  | 60          |
| Accession no. | Source               | HBV     | Sex       | Age (years) |
|--------------|----------------------|---------|-----------|-------------|
| GSM2226308   | Non-tumor tissue     | Positive| Female    | 61          |
| GSM2226309   | Non-tumor tissue     | Positive| Male      | 29          |
| GSM2226310   | Non-tumor tissue     | Positive| Male      | 44          |
| GSM2226311   | Non-tumor tissue     | Positive| Male      | 46          |
| GSM2226312   | Non-tumor tissue     | Positive| Male      | 32          |
| GSM2226313   | Non-tumor tissue     | Positive| Male      | 33          |
| GSM2226314   | Non-tumor tissue     | Positive| Male      | 28          |
| GSM2226315   | Non-tumor tissue     | Positive| Male      | 46          |
| GSM2226316   | Non-tumor tissue     | Positive| Male      | 51          |
| GSM2226317   | Non-tumor tissue     | Positive| Male      | 47          |
| GSM2226318   | Non-tumor tissue     | Positive| Male      | 52          |
| GSM2226319   | Non-tumor tissue     | Positive| Male      | 44          |
| GSM2226320   | Non-tumor tissue     | Positive| Female   | 55          |
| GSM2226321   | Non-tumor tissue     | Positive| Male      | 38          |
| GSM2226322   | Non-tumor tissue     | Positive| Female   | 56          |
| GSM2226323   | Non-tumor tissue     | Positive| Male      | 26          |
| GSM2226324   | Non-tumor tissue     | Positive| Male      | 42          |
| GSM2226325   | Non-tumor tissue     | Positive| Female   | 39          |
| GSM2226326   | Non-tumor tissue     | Positive| Female   | 71          |
| GSM2226327   | Non-tumor tissue     | Positive| Male      | 57          |
| GSM2226328   | Non-tumor tissue     | Positive| Male      | 33          |
| GSM2226329   | Non-tumor tissue     | Positive| Male      | 60          |
| GSM2226330   | Non-tumor tissue     | Positive| Male      | 34          |
| GSM2226331   | Non-tumor tissue     | Positive| Female   | 42          |
| GSM2226332   | Non-tumor tissue     | Positive| Male      | 62          |
| GSM2226333   | Non-tumor tissue     | Positive| Male      | 71          |
| GSM2226334   | Non-tumor tissue     | Positive| Female   | 48          |
| GSM2226335   | Non-tumor tissue     | Positive| Male      | 36          |
| GSM2226336   | Non-tumor tissue     | Positive| Female   | 32          |
| GSM2226337   | Non-tumor tissue     | Positive| Male      | 66          |
| GSM2226338   | Non-tumor tissue     | Positive| Male      | 31          |
| GSM2226339   | Non-tumor tissue     | Positive| Male      | 28          |
| GSM2226340   | Non-tumor tissue     | Positive| Male      | 30          |
| GSM2226341   | Non-tumor tissue     | Positive| Male      | 47          |
| GSM2226342   | Non-tumor tissue     | Positive| Male      | 36          |
| GSM2226343   | Non-tumor tissue     | Positive| Male      | 43          |
| GSM2226344   | Non-tumor tissue     | Positive| Male      | 35          |
| GSM2226345   | Non-tumor tissue     | Positive| Male      | 34          |
| GSM2226346   | Non-tumor tissue     | Positive| Male      | 43          |
| GSM2226347   | Non-tumor tissue     | Positive| Female   | 47          |
| GSM2226348   | Non-tumor tissue     | Positive| Female   | 37          |
| GSM2226349   | Non-tumor tissue     | Positive| Female   | 53          |
| GSM2226350   | Non-tumor tissue     | Positive| Male      | 58          |
| GSM2226351   | Non-tumor tissue     | Positive| Male      | 35          |
| GSM2226352   | Non-tumor tissue     | Positive| Female   | 33          |
| GSM2226353   | Non-tumor tissue     | Positive| Male      | 54          |
| GSM2226354   | Non-tumor tissue     | Positive| Female   | 37          |
| GSM2226355   | Non-tumor tissue     | Positive| Male      | 27          |
| GSM2226356   | Non-tumor tissue     | Positive| Male      | 38          |
| GSM2226357   | Non-tumor tissue     | Positive| Female   | 33          |
| GSM2226358   | Non-tumor tissue     | Positive| Male      | 58          |
| GSM2226359   | Non-tumor tissue     | Positive| Male      | 22          |
| GSM2226360   | Non-tumor tissue     | Positive| Male      | 28          |
| GSM2226361   | Non-tumor tissue     | Positive| Male      | 41          |
| GSM2226362   | Non-tumor tissue     | Positive| Male      | 42          |
| GSM2226363   | Non-tumor tissue     | Positive| Male      | 43          |
| GSM2226364   | Non-tumor tissue     | Positive| Male      | 24          |
| GSM2226365   | Non-tumor tissue     | Positive| Male      | 50          |
| GSM2226366   | Non-tumor tissue     | Positive| Male      | 23          |
| Accession no. | Source                  | HBV      | Sex     | Age (years) |
|--------------|-------------------------|----------|---------|-------------|
| GSM2226367   | Non-tumor tissue        | Positive | Female  | 38          |
| GSM2226368   | Non-tumor tissue        | Positive | Male    | 31          |
| GSM2226369   | Non-tumor tissue        | Positive | Male    | 31          |
| GSM2226370   | Non-tumor tissue        | Positive | Female  | 28          |
| GSM2226371   | Non-tumor tissue        | Positive | Male    | 35          |
| GSM2226372   | Non-tumor tissue        | Positive | Male    | 31          |
| GSM2226373   | Non-tumor tissue        | Positive | Male    | 44          |
| GSM2226374   | Non-tumor tissue        | Positive | Male    | 52          |
| GSM2226375   | Non-tumor tissue        | Positive | Male    | 66          |
| GSM2226376   | Non-tumor tissue        | Positive | Female  | 36          |
| GSM2226377   | Non-tumor tissue        | Positive | Male    | 74          |
| GSM2226378   | Non-tumor tissue        | Positive | Female  | 37          |
| GSM2226379   | Non-tumor tissue        | Positive | Male    | 53          |
| GSM2226380   | Non-tumor tissue        | Positive | Female  | 33          |
| GSM2226381   | Non-tumor tissue        | Positive | Male    | 37          |
| GSM2226382   | Non-tumor tissue        | Positive | Male    | 29          |
| GSM2226383   | Non-tumor tissue        | Positive | Male    | 63          |
| GSM2226384   | Non-tumor tissue        | Positive | Female  | 69          |
| GSM2226385   | Non-tumor tissue        | Positive | Female  | 71          |
| GSM2226386   | Non-tumor tissue        | Positive | Male    | 32          |
| GSM2226387   | Non-tumor tissue        | Positive | Male    | 51          |
| GSM2226388   | Non-tumor tissue        | Positive | Male    | 34          |
| GSM2226389   | Non-tumor tissue        | Positive | Male    | 40          |
| GSM2226390   | Non-tumor tissue        | Positive | Male    | 30          |
| GSM2226391   | Non-tumor tissue        | Positive | Male    | 36          |
| GSM2226392   | Non-tumor tissue        | Positive | Female  | 47          |
| GSM2226393   | Non-tumor tissue        | Positive | Male    | 44          |
| GSM2226394   | Non-tumor tissue        | Positive | Male    | 35          |
| GSM2226395   | Non-tumor tissue        | Positive | Male    | 49          |
| GSM2226396   | Non-tumor tissue        | Positive | Male    | 29          |
| GSM2226397   | Non-tumor tissue        | Positive | Male    | 29          |
| GSM2226398   | Non-tumor tissue        | Positive | Male    | 37          |
| GSM2226399   | Non-tumor tissue        | Positive | Male    | 32          |
| GSM2226400   | Non-tumor tissue        | Positive | Male    | 26          |
| GSM2226401   | Non-tumor tissue        | Positive | Male    | 27          |
| GSM2226402   | Non-tumor tissue        | Positive | Male    | 49          |
| GSM2226403   | Non-tumor tissue        | Positive | Female  | 61          |
| GSM2233086   | HCC tissue              | Positive | Male    | 63          |
| GSM2233087   | Non-tumor tissue        | Positive | Male    | 63          |
| GSM2233088   | HCC tissue              | Positive | Male    | 35          |
| GSM2233089   | Non-tumor tissue        | Positive | Male    | 35          |
| GSM2233090   | HCC tissue              | Positive | Male    | 40          |
| GSM2233091   | Non-tumor tissue        | Positive | Male    | 40          |
| GSM2233092   | HCC tissue              | Positive | Male    | 54          |
| GSM2233093   | Non-tumor tissue        | Positive | Male    | 54          |
| GSM2233094   | HCC tissue              | Positive | Male    | 50          |
| GSM2233095   | Non-tumor tissue        | Positive | Male    | 50          |
| GSM2233096   | HCC tissue              | Positive | Male    | 45          |
| GSM2233097   | Non-tumor tissue        | Positive | Male    | 45          |
| GSM2233098   | HCC tissue              | Positive | Female  | 43          |
| GSM2233099   | Non-tumor tissue        | Positive | Female  | 43          |
| GSM2233100   | HCC tissue              | Positive | Female  | 67          |
| GSM2233101   | Non-tumor tissue        | Positive | Female  | 67          |
| GSM2233102   | HCC tissue              | Positive | Female  | 40          |
| GSM2233103   | Non-tumor tissue        | Positive | Female  | 40          |
| GSM2233106   | HCC tissue              | Positive | Female  | 35          |
| GSM2233107   | Non-tumor tissue        | Positive | Female  | 35          |
| GSM2233108   | HCC tissue              | Positive | Male    | 54          |
| GSM2233109   | Non-tumor tissue        | Positive | Male    | 54          |
| Accession no. | Source               | HBV     | Sex | Age (years) |
|--------------|----------------------|---------|-----|-------------|
| GSM2233110   | HCC tissue           | Positive| Male| 50          |
| GSM2233111   | Non-tumor tissue     | Positive| Male| 50          |
| GSM2233112   | HCC tissue           | Positive| Male| NA          |
| GSM2233113   | Non-tumor tissue     | Positive| Male| NA          |
| GSM1329321   | HCC tissue           | Positive| NA  | NA          |
| GSM1329322   | HCC tissue           | Positive| NA  | NA          |
| GSM1329323   | HCC tissue           | Positive| NA  | NA          |
| GSM1329324   | HCC tissue           | Positive| NA  | NA          |
| GSM1329325   | HCC tissue           | Positive| NA  | NA          |
| GSM1329326   | HCC tissue           | Positive| NA  | NA          |
| GSM1329327   | HCC tissue           | Positive| NA  | NA          |
| GSM1329328   | HCC tissue           | Positive| NA  | NA          |
| GSM1329329   | HCC tissue           | Positive| NA  | NA          |
| GSM1329330   | HCC tissue           | Positive| NA  | NA          |
| GSM1329331   | HCC tissue           | Positive| NA  | NA          |
| GSM1329332   | HCC tissue           | Positive| NA  | NA          |
| GSM1329333   | HCC tissue           | Positive| NA  | NA          |
| GSM1329334   | HCC tissue           | Positive| NA  | NA          |
| GSM1329335   | HCC tissue           | Positive| NA  | NA          |
| GSM1329336   | HCC tissue           | Positive| NA  | NA          |
| GSM1329337   | HCC tissue           | Positive| NA  | NA          |
| GSM1329338   | HCC tissue           | Positive| NA  | NA          |
| GSM1329339   | HCC tissue           | Positive| NA  | NA          |
| GSM1329340   | HCC tissue           | Positive| NA  | NA          |
| GSM1329341   | HCC tissue           | Positive| NA  | NA          |
| GSM1329342   | HCC tissue           | Positive| NA  | NA          |
| GSM1329343   | HCC tissue           | Positive| NA  | NA          |
| GSM1329344   | HCC tissue           | Positive| NA  | NA          |
| GSM1329345   | HCC tissue           | Positive| NA  | NA          |
| GSM1329346   | HCC tissue           | Positive| NA  | NA          |
| GSM1329347   | HCC tissue           | Positive| NA  | NA          |
| GSM1329348   | HCC tissue           | Positive| NA  | NA          |
| GSM1329349   | HCC tissue           | Positive| NA  | NA          |
| GSM1329350   | HCC tissue           | Positive| NA  | NA          |
| GSM1329351   | HCC tissue           | Positive| NA  | NA          |
| GSM1329352   | HCC tissue           | Positive| NA  | NA          |
| GSM1329353   | HCC tissue           | Positive| NA  | NA          |
| GSM1329354   | HCC tissue           | Positive| NA  | NA          |
| GSM1329355   | HCC tissue           | Positive| NA  | NA          |
| GSM1329356   | HCC tissue           | Positive| NA  | NA          |
| GSM1329357   | HCC tissue           | Positive| NA  | NA          |
| GSM1329358   | HCC tissue           | Positive| NA  | NA          |
| GSM1329359   | HCC tissue           | Positive| NA  | NA          |
| GSM1329360   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329361   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329362   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329363   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329364   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329365   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329366   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329367   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329368   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329369   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329370   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329371   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329372   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329373   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329374   | Non-tumor tissue     | Positive| NA  | NA          |
| GSM1329375   | Non-tumor tissue     | Positive| NA  | NA          |
Table SI. Continued.

| Accession no. | Source            | HBV  | Sex  | Age (years) |
|---------------|-------------------|------|------|-------------|
| GSM1329376    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329377    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329378    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329379    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329380    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329381    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329382    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329383    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329384    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329385    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329386    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329387    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329388    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329389    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329390    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329391    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329392    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329393    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329394    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329395    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329396    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329397    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329398    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329399    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329400    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329401    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329402    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329403    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329404    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329405    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329406    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329407    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329408    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329409    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329410    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329411    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329412    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329413    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329414    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329415    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329416    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329417    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329418    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329419    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329420    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329421    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329422    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329423    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329424    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329425    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329426    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329427    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329428    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329429    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329430    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329431    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329432    | Non-tumor tissue  | Positive | NA   | NA          |
| GSM1329433    | Non-tumor tissue  | Positive | NA   | NA          |
| Accession no. | Source            | HBV    | Sex | Age (years) |
|--------------|-------------------|--------|-----|-------------|
| GSM1329434   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329435   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329436   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329437   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329438   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329439   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329440   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329441   | HCC tissue        | Positive | NA  | NA          |
| GSM1329442   | HCC tissue        | Positive | NA  | NA          |
| GSM1329443   | HCC tissue        | Positive | NA  | NA          |
| GSM1329444   | HCC tissue        | Positive | NA  | NA          |
| GSM1329445   | HCC tissue        | Positive | NA  | NA          |
| GSM1329446   | HCC tissue        | Positive | NA  | NA          |
| GSM1329447   | HCC tissue        | Positive | NA  | NA          |
| GSM1329448   | HCC tissue        | Positive | NA  | NA          |
| GSM1329449   | HCC tissue        | Positive | NA  | NA          |
| GSM1329450   | HCC tissue        | Positive | NA  | NA          |
| GSM1329451   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329452   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329453   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329454   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329455   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329456   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329457   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329458   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329459   | Non-tumor tissue  | Positive | NA  | NA          |
| GSM1329460   | Non-tumor tissue  | Positive | NA  | NA          |

HCC, human hepatocellular carcinoma; HBV, hepatitis B virus; NA, not available.
Table SII. Top 100 upregulated differentially expressed genes.

| Probe ID  | Gene       | Fold change | Adjusted P-value |
|-----------|------------|-------------|------------------|
| 206239_s_at | SPINK1     | 4.567348387 | 9.90x10^-43     |
| 211470_s_at | SULT1C2    | 3.965534914 | 1.47x10^-44     |
| 205815_at  | REG3A      | 3.770039412 | 1.10x10^-24     |
| 209220_at  | GPC3       | 3.752196862 | 1.99x10^-40     |
| 201291_s_at | TOP2A      | 3.555127579 | 3.85x10^-77     |
| 206561_s_at | AKR1B10    | 3.46810343  | 1.21x10^-24     |
| 242881_x_at | DUXAP10    | 3.301086607 | 1.01x10^-25     |
| 204602_at  | DKK1       | 3.048004476 | 1.88x10^-37     |
| 203820_s_at | IGF2BP3    | 3.034781559 | 1.76x10^-56     |
| 238021_s_at | CRNDE      | 2.985078406 | 4.63x10^-52     |
| 209921_at  | SLC7A11    | 2.980302339 | 1.66x10^-51     |
| 213194_at  | ROBO1      | 2.947155321 | 1.69x10^-71     |
| 241418_at  | NMRL1P1    | 2.911349891 | 8.91x10^-59     |
| 223642_at  | ZIC2       | 2.821525207 | 4.36x10^-64     |
| 222608_s_at | ANLN       | 2.787055993 | 6.53x10^-62     |
| 209875_s_at | DKK1       | 2.758625836 | 3.14x10^-23     |
| 235004_at  | RBM24      | 2.743050577 | 1.06x10^-57     |
| 212551_at  | CAP2       | 2.73961435  | 9.30x10^-91     |
| 214612_x_at | MAGEA6     | 2.698311238 | 6.80x10^-34     |
| 202422_s_at | ACSL4      | 2.663914238 | 2.38x10^-33     |
| 219918_s_at | ASPM       | 2.652302575 | 4.07x10^-52     |
| 235763_at  | SLC44A5    | 2.472658451 | 2.37x10^-33     |
| 207828_s_at | CENPF      | 2.472581020 | 2.98x10^-78     |
| 214710_s_at | CCNB1      | 2.403923370 | 1.64x10^-96     |
| 225681_at  | CTHR1C     | 2.384346752 | 1.53x10^-26     |
| 212531_at  | LCN2       | 2.383664937 | 3.04x10^-31     |
| 201890_at  | RRM2       | 2.381259393 | 3.31x10^-38     |
| 33323_r_at | SFN        | 2.36591617  | 9.97x10^-30     |
| 218009_s_at | PRC1       | 2.350925294 | 8.64x10^-54     |
| 204162_at  | NDC80      | 2.332439517 | 1.54x10^-34     |
| 219787_s_at | ECT2       | 2.313749179 | 8.57x10^-52     |
| 207165_at  | HMMR       | 2.304640216 | 1.82x10^-48     |
| 204825_at  | MELK       | 2.298883197 | 1.43x10^-57     |
| 203477_at  | COL15A1    | 2.295323078 | 1.49x10^-33     |
| 203213_at  | CDK1       | 2.217576100 | 9.42x10^-49     |
| 206626_s_at | SSX1       | 2.25344817  | 3.68x10^-30     |
| 207325_s_at | MAGEA1     | 2.252155461 | 3.97x10^-42     |
| 204720_s_at | DNAJC6     | 2.236082454 | 2.40x10^-55     |
| 204105_s_at | NRCAM      | 2.232778933 | 1.57x10^-38     |
| 227892_at  | PRKAA2     | 2.229124796 | 3.47x10^-44     |
| 227510_s_at | MALAT1     | 2.224576694 | 5.41x10^-17     |
| 201468_s_at | NQO1       | 2.209490964 | 2.70x10^-26     |
| 205110_s_at | FGF13      | 2.207535230 | 1.23x10^-32     |
| 223381_at  | NUF2       | 2.186987390 | 5.66x10^-36     |
| 205476_at  | CCL20      | 2.181812965 | 1.34x10^-20     |
| 203755_at  | BUB1B      | 2.178984131 | 2.76x10^-50     |
| 218755_at  | KIF20A     | 2.153373571 | 8.72x10^-52     |
| 231265_at  | COX7B2     | 2.150792051 | 5.69x10^-41     |
| 221558_s_at | LEFI       | 2.122850025 | 2.29x10^-38     |
| 225612_s_at | B3GNT5     | 2.117997087 | 7.16x10^-31     |
| 221830_at  | RAP2A      | 2.114424031 | 8.56x10^-45     |
| 210467_s_at | MAGEA12    | 2.103394030 | 1.54x10^-30     |
| 218585_s_at | DTL        | 2.102692036 | 2.24x10^-40     |
| 204641_at  | NEK2       | 2.102002866 | 8.57x10^-52     |
| 222077_s_at | RACGAP1    | 2.081618410 | 9.00x10^-53     |
| 208079_s_at | AURKA      | 2.076336333 | 8.54x10^-52     |
| 238732_at  | COL24A1    | 2.069789084 | 6.19x10^-40     |
| 204822_at  | TTK        | 2.066715777 | 2.45x10^-47     |
| 226545_at  | CD109      | 2.025938851 | 4.45x10^-34     |
| Probe ID   | Gene   | Fold change | Adjusted P-value |
|------------|--------|-------------|------------------|
| 212094_at  | PEG10  | 2.016229445 | 3.69x10^{-15}    |
| 229947_at  | PI15   | 2.014019560 | 6.62x10^{-40}    |
| 202870_s_at| CDC20  | 2.012447721 | 7.80x10^{-46}    |
| 227812_at  | TNFRSF19 | 2.011379246 | 4.09x10^{-40}    |
| 1559316_at | LOC105374676 | 2.009521085 | 4.54x10^{-52}    |
| 227314_at  | ITGA2  | 2.000997265 | 1.89x10^{-47}    |
| 218662_s_at| NCPG   | 1.996025542 | 1.76x10^{-52}    |
| 225275_at  | EDIL3  | 1.993051713 | 6.62x10^{-28}    |
| 232707_at  | ISX    | 1.972500919 | 5.81x10^{-45}    |
| 236641_at  | KIF14  | 1.968288880 | 1.80x10^{-49}    |
| 205373_at  | CTNNA2 | 1.965428389 | 1.02x10^{-23}    |
| 231310_at  | TRIM71 | 1.964000168 | 4.02x10^{-40}    |
| 227226_at  | MRAP2  | 1.960916304 | 3.21x10^{-52}    |
| 205348_s_at| DYNC1I1 | 1.938331070 | 1.13x10^{-55}    |
| 203764_at  | DLGAP5 | 1.932405364 | 9.78x10^{-48}    |
| 206102_at  | GINS1  | 1.927081093 | 5.67x10^{-38}    |
| 213956_at  | CEP350 | 1.925623129 | 5.23x10^{-27}    |
| 219148_at  | PBK    | 1.911432600 | 3.53x10^{-51}    |
| 207663_x_at| GAGE3  | 1.911384548 | 3.98x10^{-20}    |
| 202705_at  | CCNB2  | 1.909885495 | 1.65x10^{-51}    |
| 242488_at  | CHRM3  | 1.909367068 | 1.21x10^{-36}    |
| 227084_at  | DTNA   | 1.903177347 | 9.28x10^{-24}    |
| 200648_s_at| GLUL   | 1.896670809 | 3.41x10^{-25}    |
| 227740_at  | UHMK1  | 1.888915473 | 1.24x10^{-28}    |
| 204444_at  | KIF11  | 1.878180440 | 2.38x10^{-49}    |
| 232195_at  | GPR158 | 1.876989895 | 7.21x10^{-48}    |
| 233170_at  | LINC00348 | 1.872338598 | 1.80x10^{-26}    |
| 204341_at  | TRIM16 | 1.852711615 | 2.93x10^{-29}    |
| 213924_at  | GNAL   | 1.849607096 | 7.80x10^{-46}    |
| 201656_at  | ITGA6  | 1.841819309 | 4.55x10^{-52}    |
| 205564_at  | PAGE4  | 1.833245320 | 5.48x10^{-23}    |
| 218039_at  | NUSAP1 | 1.832903837 | 2.07x10^{-43}    |
| 223287_s_at| FOXP1  | 1.829905989 | 1.54x10^{-32}    |
| 226085_at  | CBX5   | 1.828900857 | 1.15x10^{-28}    |
| 229638_at  | IRX3   | 1.824992304 | 3.36x10^{-30}    |
| 235521_at  | HOXA3  | 1.824038333 | 1.10x10^{-28}    |
| 218883_s_at| CENPU  | 1.820300011 | 1.08x10^{-33}    |
| 202095_s_at| BIRC5  | 1.819813555 | 5.86x10^{-48}    |
| 1559213_at | LINC01419 | 1.808771106 | 3.10x10^{-31}    |
| 225540_at  | MAP2   | 1.798074857 | 4.80x10^{-34}    |
| 218355_at  | KIF4A  | 1.793230179 | 2.02x10^{-50}    |
Table SIII. Top 100 downregulated differentially expressed genes.

| Probe ID     | Gene   | Fold change | Adjusted P-value |
|--------------|--------|-------------|------------------|
| 220491_at    | HAMP   | -4.983632921| 4.89x10^-40     |
| 205866_at    | FCN3   | -4.729403108| 1.63x10^-96     |
| 222484_s_at  | CXCL14 | -4.664513026| 2.76x10^-105    |
| 205984_at    | CRHBP  | -4.504769969| 5.41x10^-83     |
| 207804_s_at  | FCN2   | -4.498217224| 1.69x10^-97     |
| 207201_s_at  | SLC22A1| -4.496842306| 9.93x10^-68     |
| 220496_at    | CLEC1B | -4.489575949| 1.13x10^-112    |
| 217546_at    | MT1M   | -4.427062929| 4.20x10^-44     |
| 230478_at    | OIT3   | -4.401727477| 1.29x10^-106    |
| 1559573_at   | LINC01093| -4.372165201| 7.87x10^-89     |
| 223699_at    | CNDP1  | -4.185131569| 2.30x10^-73     |
| 229476_s_at  | THRSP  | -4.124366630| 2.88x10^-56     |
| 1559065_a_at | CLEC4G | -4.114961753| 1.36x10^-99     |
| 206354_at    | SLCO1B3| -4.081557901| 3.55x10^-43     |
| 207102_at    | AKR1D1 | -4.020716573| 6.22x10^-49     |
| 1564706_s_at | GLS2   | -4.018224948| 3.74x10^-70     |
| 207608_x_at  | CYP1A2 | -4.013090089| 7.43x10^-78     |
| 206727_at    | C9     | -3.961247256| 9.82x10^-48     |
| 209687_at    | CXCL12 | -3.885309405| 1.16x10^-40     |
| 219014_at    | PLAC8  | -3.774128748| 3.42x10^-72     |
| 207995_s_at  | CLEC4M | -3.732362194| 5.50x10^-88     |
| 231678_s_at  | ADH4   | -3.682472263| 1.77x10^-48     |
| 205554_s_at  | DNAE1L3| -3.666231016| 1.29x10^-48     |
| 220801_at    | HAO2   | -3.668358383| 4.99x10^-76     |
| 211896_s_at  | DCN    | -3.625520940| 1.19x10^-46     |
| 220432_s_at  | CYP39A1| -3.616388369| 2.51x10^-44     |
| 220116_at    | KCNN2  | -3.587327181| 4.31x10^-57     |
| 205819_at    | MARCO  | -3.569710716| 5.45x10^-76     |
| 202992_at    | C7     | -3.473352727| 3.89x10^-43     |
| 230135_at    | HHIP   | -3.458281369| 1.29x10^-51     |
| 210328_at    | GNMT   | -3.412414732| 1.25x10^-52     |
| 213629_s_at  | MT1F   | -3.412271922| 3.79x10^-72     |
| 214478_at    | SPP2   | -3.405396399| 1.74x10^-74     |
| 205225_at    | ESR1   | -3.355285624| 2.09x10^-24     |
| 237350_at    | TTC36  | -3.33493780| 7.78x10^-44     |
| 214320_x_at  | CYP2A6 | -3.32141585| 3.55x10^-54     |
| 219954_s_at  | GBA3   | -3.304920162| 1.98x10^-59     |
| 207262_at    | APOF   | -3.287687923| 1.09x10^-22     |
| 214621_at    | GYS2   | -3.272101039| 8.61x10^-56     |
| 206797_at    | NAT2   | -3.270355860| 8.59x10^-76     |
| 242817_at    | PGLYRP2| -3.25627679| 2.41x10^-53     |
| 205498_at    | GHR    | -3.223776543| 1.20x10^-46     |
| 237390_at    | ADRA1A | -3.213027372| 8.85x10^-54     |
| 204704_s_at  | ALDOB  | -3.208187451| 3.84x10^-55     |
| 209301_at    | CA2    | -3.203130234| 1.38x10^-58     |
| 206172_at    | IL13RA2| -3.185151095| 1.11x10^-52     |
| 206210_s_at  | CETP   | -3.179352566| 1.73x10^-66     |
| 204428_s_at  | LCAT   | -3.145019681| 1.47x10^-76     |
| 205363_at    | BBOX1  | -3.135951206| 2.16x10^-42     |
| 208147_s_at  | CYP2C8 | -3.115227228| 8.68x10^-61     |
| 237765_at    | SLC25A47| -3.059884941| 4.64x10^-91     |
| 204745_x_at  | MT1G   | -3.056755948| 2.64x10^-74     |
| 206424_at    | CYP26A1| -3.052909242| 1.50x10^-54     |
| 206680_at    | CD5L   | -3.048296979| 1.47x10^-65     |
| 203914_x_at  | HPGD   | -3.037191904| 1.67x10^-37     |
| 222083_at    | GLYT   | -3.016429448| 4.09x10^-90     |
| 210521_s_at  | FETUB  | -3.002923988| 3.99x10^-44     |
| Probe ID       | Gene   | Fold change | Adjusted P-value |
|---------------|--------|-------------|------------------|
| 209696_at     | FBP1   | -2.998761494 | 3.76x10^{-73}   |
| 205943_at     | TDO2   | -2.990540265 | 8.35x10^{-56}   |
| 229777_at     | CLRN3  | -2.976676020 | 1.94x10^{-49}   |
| 1553296_at    | ADGRG7 | -2.971877106 | 9.76x10^{-73}   |
| 209541_at     | IGF1   | -2.941716385 | 2.62x10^{-54}   |
| 212592_at     | JCHAIN | -2.930375439 | 1.50x10^{-28}   |
| 212859_x_at   | MT1E   | -2.914546966 | 1.19x10^{-68}   |
| 205728_at     | TENM1  | -2.883518868 | 1.37x10^{-47}   |
| 223784_at     | TMEM27 | -2.883022716 | 3.35x10^{-63}   |
| 211138_s_at   | KMO    | -2.878294769 | 4.66x10^{-70}   |
| 207407_x_at   | CYP4A11| -2.876944546 | 3.05x10^{-58}   |
| 207027_at     | HGFAC  | -2.869011560 | 6.98x10^{-58}   |
| 204955_at     | SRPX   | -2.866951972 | 4.20x10^{-50}   |
| 225575_at     | LIFR   | -2.862069105 | 1.36x10^{-81}   |
| 209469_at     | GPM6A  | -2.855427010 | 3.94x10^{-50}   |
| 206461_x_at   | MT1H   | -2.854121450 | 2.40x10^{-76}   |
| 204326_x_at   | MT1X   | -2.849534388 | 1.83x10^{-66}   |
| 204999_s_at   | ATF5   | -2.835003848 | 2.36x10^{-38}   |
| 1568638_a_at  | IDO2   | -2.834964635 | 2.01x10^{-54}   |
| 214677_s_at   | IGLC1  | -2.833878727 | 5.10x10^{-22}   |
| 227654_at     | FAM65C | -2.833558573 | 7.74x10^{-107}  |
| 232449_at     | BCO2   | -2.832552138 | 1.24x10^{-65}   |
| 209960_at     | HGF    | -2.820196109 | 2.07x10^{-54}   |
| 207584_at     | LPA    | -2.814953772 | 5.40x10^{-47}   |
| 228186_s_at   | RSPO3  | -2.810229499 | 3.59x10^{-90}   |
| 207185_at     | SLC10A1| -2.806976103 | 6.44x10^{-54}   |
| 205440_s_at   | NPY1R  | -2.765034793 | 4.05x10^{-82}   |
| 206755_at     | CYP2B6 | -2.764826910 | 4.83x10^{-44}   |
| 206643_at     | HAL    | -2.756454495 | 2.82x10^{-39}   |
| 230577_at     | LINC00844| -2.753376513| 2.02x10^{-29}   |
| 241994_at     | XDH    | -2.746362957 | 1.86x10^{-44}   |
| 229230_at     | SLC51A | -2.729578425 | 1.63x10^{-43}   |
| 206840_at     | AFM    | -2.729070946 | 6.26x10^{-48}   |
| 208937_s_at   | ID1    | -2.725410248 | 2.15x10^{-33}   |
| 206380_s_at   | CFP    | -2.695867885 | 7.86x10^{-70}   |
| 210143_at     | ANXA10 | -2.679570335 | 1.64x10^{-55}   |
| 225316_at     | MFSD2A | -2.675662341 | 1.47x10^{-64}   |
| 210233_at     | IL1RAP | -2.645432374 | 4.08x10^{-53}   |
| 233604_at     | FLJ22763| -2.644657391| 7.73x10^{-44}   |
| 1552280_at    | TIMD4  | -2.642076802 | 1.14x10^{-36}   |
| 205695_at     | SDS    | -2.618475766 | 2.57x10^{-29}   |
| 205844_at     | VNN1   | -2.579935361 | 1.92x10^{-27}   |
| 1431_at       | CYP2E1 | -2.571116689 | 1.69x10^{-25}   |