Additional file 1 - ‘Restitution of gene expression and histone acetylation signatures altered by hepatitis B virus through anti-viral miR-like molecules in non-transformed murine hepatocytes’

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Figure S1

Comparison of differential mRNA accumulation between murine HBV-positive mice liver samples with or without HCC, mouse cell lines and humans.
A. Relative enrichment of mRNA in 1.2.32 (Tg[HBV 1.3 genome]Chi32) mice (HCC positive [n=5] versus HCC-negative [n=5]). HSP90AB1, ACTB and GAPDH were used for normalization (Cyan and purple shaded). **: p≤0.01; *: 0.01≤p≤0.05. Black asterisks: HSP90AB1, ACTB and GAPDH were used for normalization. Red asterisks: HSP90AB1 and ACTB were used for normalization (Boxplots not shown). B. Relative enrichment of mRNA in MMH-D3 versus HBV-Met. H02 to H05 were used for normalization. C. Abundance of selected mRNAs in human liver from juvenile patients with chronic hepatitis B (non-HCC; n=3) versus HBV-negative specimens (n=3). Statistics and coloring correspond to Figure 1.

Figure S2

Gene expression analyses in HBV-Met transfected with the shRNA-cassette deficient pEPI-luciferase vector versus untreated HBV-Met. Statistics and coloring correspond to Figure 1.
Accumulation of SIRT1 -7mRNAs in HBV-Met cells compared with MMH-D3 cells. The mRNAs of SIRT1, SIRT2, SIRT4 and SIRT7 were slightly but significantly (*: 0.01≤p≤0.05) elevated in HBV-Met cells when compared with MMH-D3 cells, whereas SIRT3 and SIRT4 could not be detected in both cell lines. Statistics correspond to Figure 1.

Figure S4

| Position | Unigene   | Refseq     | Symbol | Description                                   |
|----------|-----------|------------|--------|-----------------------------------------------|
| A01      | Mm.27681  | NM_009615  | Adam17 | A disintegrin and metallopeptidase domain 17 |
| A02      | Mm.6645   | NM_009652  | Akt1   | Thymoma viral proto-oncogene 1               |
| A03      | Mm.439874 | NM_007426  | Angpt2 | Angiopoietin 2                               |
| A04      | Mm.19904  | NM_007527  | Bax    | Bcl2-associated X protein                    |
| A05      | Mm.257460 | NM_009741  | Bcl2   | B-cell leukemia/lymphoma 2                   |
| A06      | Mm.238213 | NM_009743  | Bcl2l1 | Bcl2-like 1                                  |
| A07      | Mm.235081 | NM_007544  | Bid    | BH3 interacting domain death agonist         |
| A08      | Mm.335659 | NM_007465  | Birc2  | Baculoviral IAP repeat-containing 2           |
| A09      | Mm.8552   | NM_009689  | Birc5  | Baculoviral IAP repeat-containing 5           |
| A10      | Mm.336851 | NM_009812  | Casp8  | Caspase 8                                    |
| A11      | Mm.284248 | NM_013653  | Ccl5   | Chemokine (C-C motif) ligand 5                |
| A12      | Mm.273049 | NM_007631  | Ccnd1  | Cyclin D1                                    |
| B01      | Mm.333406 | NM_009829  | Ccnd2  | Cyclin D2                                    |
| B02      | Mm.35605  | NM_009864  | Cdh1   | Cadherin 1                                   |
| B03      | Mm.334841 | NM_019707  | Cdh13  | Cadherin 13                                  |
| B04      | Mm.195663 | NM_007669  | Cdkn1a | Cyclin-dependent kinase inhibitor 1A (P21)    |
| B05      | Mm.2958   | NM_009875  | Cdkn1b | Cyclin-dependent kinase inhibitor 1B          |
| Gene ID | Organism | Gene Symbol | Description |
|--------|----------|-------------|-------------|
| Mm.4733 | Mm.336848 | Cyclin-dependent kinase inhibitor 2A |
| Mm.291928 | Mm.1401 | CASP8 and FADD-like apoptosis regulator |
| Mm.29629 | Mm.210875 | Deleted in liver cancer 1 |
| Mm.18036 | Mm.5126 | Epidermal growth factor |
| Mm.8534 | Mm.358397 | Epidermal growth factor receptor |
| Mm.258397 | Mm.1360 | E1A binding protein p300 |
| Mm.397619 | Mm.1526 | Fadd (TNFRSF6)-associated via death domain |
| Mm.389712 | Mm.1626 | Fas (TNF receptor superfamily member 6) |
| Mm.27906 | Mm.1626 | Fragile histidine triad gene |
| Mm.297906 | Mm.10228 | Fms-like tyrosine kinase 1 |
| Mm.297906 | Mm.80857 | Frizzled homolog 7 (Drosophila) |
| Mm.1360 | Mm.1360 | Growth arrest and DNA-damage-inducible 45 beta |
| Mm.299292 | Mm.13541 | Glutathione S-transferase, pi 1 |
| Mm.267078 | Mm.20259 | Hedgehog-interacting protein |
| Mm.254493 | Mm.334313 | Harvey rat sarcoma virus oncogene 1 |
| Mm.23000 | Mm.10514 | Insulin-like growth factor 2 |
| Mm.21300 | Mm.808341 | Insulin-like growth factor binding protein 1 |
| Mm.29254 | Mm.808343 | Insulin-like growth factor binding protein 3 |
| Mm.4952 | Mm.10570 | Insulin receptor substrate 1 |
| Mm.263396 | Mm.10578 | Integrin beta 1 (fibronectin receptor beta) |
| Mm.285 | Mm.10612 | Kinase insert domain protein receptor |
| Mm.255219 | Mm.10700 | Lymphoid enhancer binding factor 1 |
| Mm.1639 | Mm.808562 | Myeloid cell leukemia sequence 1 |
| Mm.34844 | Mm.808591 | Met proto-oncogene |
| Mm.4619 | Mm.343101 | Mut5 homolog 2 (E. coli) |
| Mm.4952 | Mm.10829 | Mut5 homolog 3 (E. coli) |
| Mm.130883 | Mm.26002 | Metadherin |
| Mm.2444 | Mm.10849 | Myelocytomatosis oncogene |
| Mm.256765 | Mm.10869 | Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105 |
| Mm.400954 | Mm.10937 | Neuroblastoma ras oncogene |
| Mm.378474 | Mm.177906 | Opioid binding protein/cell adhesion molecule-like |
| Mm.221403 | Mm.11058 | Platelet derived growth factor receptor, alpha polypeptide |
| Mm.24163 | Mm.23371 | Protein (peptidyl-prolyl cis/trans isomerase) NIMA-interacting 1 |
| Mm.245395 | Mm.808960 | Phosphatase and tensin homolog |
| Mm.292547 | Mm.11198 | Prostaglandin-endoperoxide synthase 2 |
| Mm.254494 | Mm.7982 | PTK2 protein tyrosine kinase 2 |
| Mm.24163 | Mm.23258 | PYD and CARD domain containing |
| Mm.292510 | Mm.09007 | RAS-related C3 botulinum substrate 1 |
| Mm.12091 | Mm.19713 | Ras association (RalGDS/AF-6) domain family member 1 |
| Mm.273862 | Mm.09029 | Retinoblastoma 1 |
| Mm.425236 | Mm.11261 | Retinol |
| Gene | ID | Gene Name | Description |
|------|----|-----------|-------------|
| F05  | Mm.378894 | Runx3 | Runt related transcription factor 3 |
| F06  | Mm.19155 | Sfrp2 | Secreted frizzled-related protein 2 |
| F07  | Mm.100399 | Smad4 | MAD homolog 4 (Drosophila) |
| F08  | Mm.34407 | Smad7 | MAD homolog 7 (Drosophila) |
| F09  | Mm.130 | Socs1 | Suppressor of cytokine signaling 1 |
| F10  | Mm.3468 | Socs3 | Suppressor of cytokine signaling 3 |
| F11  | Mm.249934 | Stat3 | Signal transducer and activator of transcription 3 |
| F12  | Mm.4269 | Tcf4 | Transcription factor 4 |
| G01  | Mm.10109 | Tert | Telomerase reverse transcriptase |
| G02  | Mm.137222 | Tgfa | Transforming growth factor alpha |
| G03  | Mm.248380 | Tgfb1 | Transforming growth factor, beta 1 |
| G04  | Mm.172346 | Tgfbr2 | Transforming growth factor, beta receptor II |
| G05  | Mm.38049 | Tlr4 | Toll-like receptor 4 |
| G06  | Mm.193430 | Tnfrsf10b | Tumor necrosis factor receptor superfamily, member 10b |
| G07  | Mm.1062 | Tnfsf10 | Tumor necrosis factor (ligand) superfamily, member 10 |
| G08  | Mm.222 | Trp53 | Transformation related protein 53 |
| G09  | Mm.282184 | Vgfa | Vascular endothelial growth factor A |
| G10  | Mm.389339 | Wt1 | Wilms tumor 1 homolog |
| G11  | Mm.259879 | Xiap | X-linked inhibitor of apoptosis |
| G12  | Mm.221992 | Yap1 | Yes-associated protein 1 |
| H01  | Mm.3317 | Gusb | Glucuronidase, beta |
| H02  | Mm.299381 | Hprt | Hypoxanthine guanine phosphoribosyl transferase |
| H03  | Mm.2180 | Hsp90ab1 | Heat shock protein 90 alpha (cytosolic), class B member 1 |
| H04  | Mm.343110 | Gapdh | Glyceraldehyde-3-phosphate dehydrogenase |
| H05  | Mm.328431 | Actb | Actin, beta |

**Genes in focus and numbering (column 1) assigned to Figures 1-3 and Additional file 1:**

Figures S1-S2.