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**Supplementary Data**

**Psoralen inhibits hepatitis B viral replication by down-regulating the host transcriptional machinery of viral promoters**

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**Supplementary Table S1 Sequences of primers used for quantitative real-time PCR**

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| --- | --- |
| Primer name | Seqμence (5’-3’) |
| X | Forward | CACCTCTCTTTACGCGGACT |
| Reverse | GGTCGTTGACATTGCAGAGA |
| Precore | Forward | TTCGCACTCCTCCAGCTTAT |
| Reverse | TCCCCACCTTATGAGTCCAA |
| PreS1 | Forward | CCCTATTATCCTGATAACGTG G |
| Reverse | GCTACGTGTGGATTCTCTCTT |
| PreS2/S | Forward | CCACCATGCAGTGGAACTC |
| Reverse | TGTGTTCTCCATGTTCGGTG |
| pgRNA | Forward | GCCTTAGAGTCTCCTGAGCA |
| Reverse | GAGGGAGTTCTTCTTCTAGG |
| FOXO1 | Forward | AGTGGATGGTCAAGAGCGTG |
| Reverse | TGTTGTCCATGGATGCAGCT |
| PGC1α | Forward | GATGGCCTGTTTGATGACAG |
| Reverse | TTTGGGTGGTGACACAGAAT |
| FXRα | Forward | TGTGAGGGGTGTAAAGGTTTCT |
| Reverse | GCCTGTATACATACATTCAGCCA |
| PPARα | Forward | GAAGCTGTCCTGGCTCAGAT |
| Reverse | TCCCCGCAGATTCTACATT |
| HES1 | Forward | AAGAAAGATAGCTCGCGGCAT |
| Reverse | CCAGCACACTTGGGTCTGT |
| ZHX2 | Forward | GGTTCGGACATCACAAGTAGTAG |
| Reverse | GGTGTGCCGATTCCTTTCTCT |
| RXRα | Forward | ACATGCAGATGGACAAGACG |
| Reverse | GAGAGCCCCTTGGAGTCAG |
| NFIA | Forward | TAGGCAGGCCGACAAGGTTAC |
| Reverse | CTTGCATATTCCTGTGGGCT |
| GAPDH | Forward | GAAGGTGAAGGTCGGAGTC |
| Reverse | GAAGATGGTGATGGGATTTC |

 **Supplementary Fig. S1. The pHBV1.3 transfected huh7 cells were administered by psoralen, and collected and analyzed after 48 hours.** (A) Schematic diagram of the experiment. (B) HBV RNA was detected by northern blot. (C) HBV replication was analyzed by southern blot. (D) Core protein was detected by western blotting. (E)Supernatant was used to analyze the levels of secreted HBsAg and HBeAg by ELISA. Values are means ± SD of 3 independent experiments. \**P*<0.05, \*\**P*<0.01.

**Supplementary Fig. S2 psoralen had no inhibitory effect on these transcription factors.** Huh7 cells treated with psoralen(25–200 μmol/L) were harvested at 5 days post treatment, and total RNAs and proteins were extracted. (A) The mRNA levels of transcription factors were quantified by RT-qPCR, and normalized to GAPDH gene. Huh7 cells without psoralen treatment were as the control samples. Data are presented as mean ± SD. \*p <0.05 compared with untreated samples.