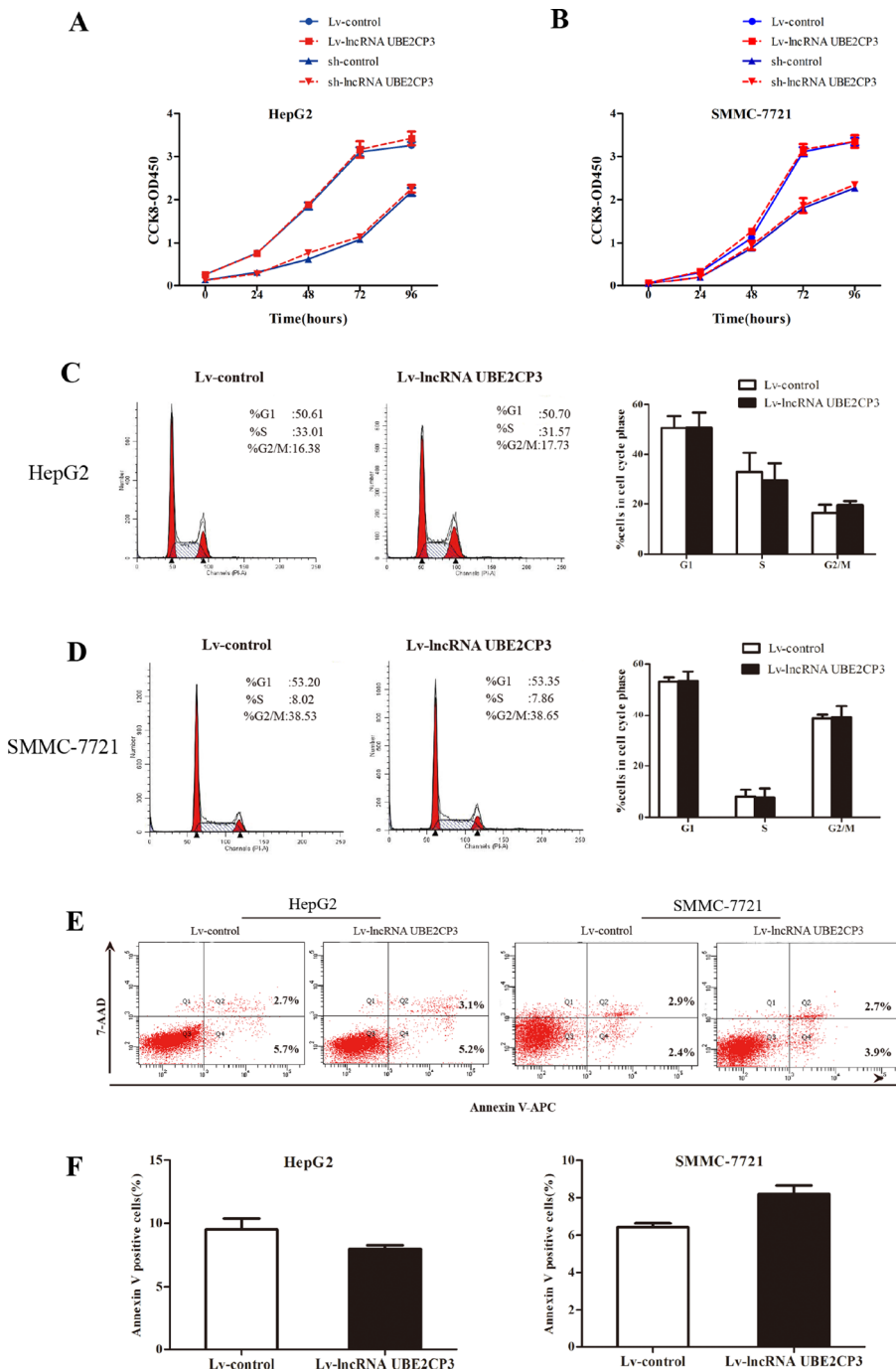
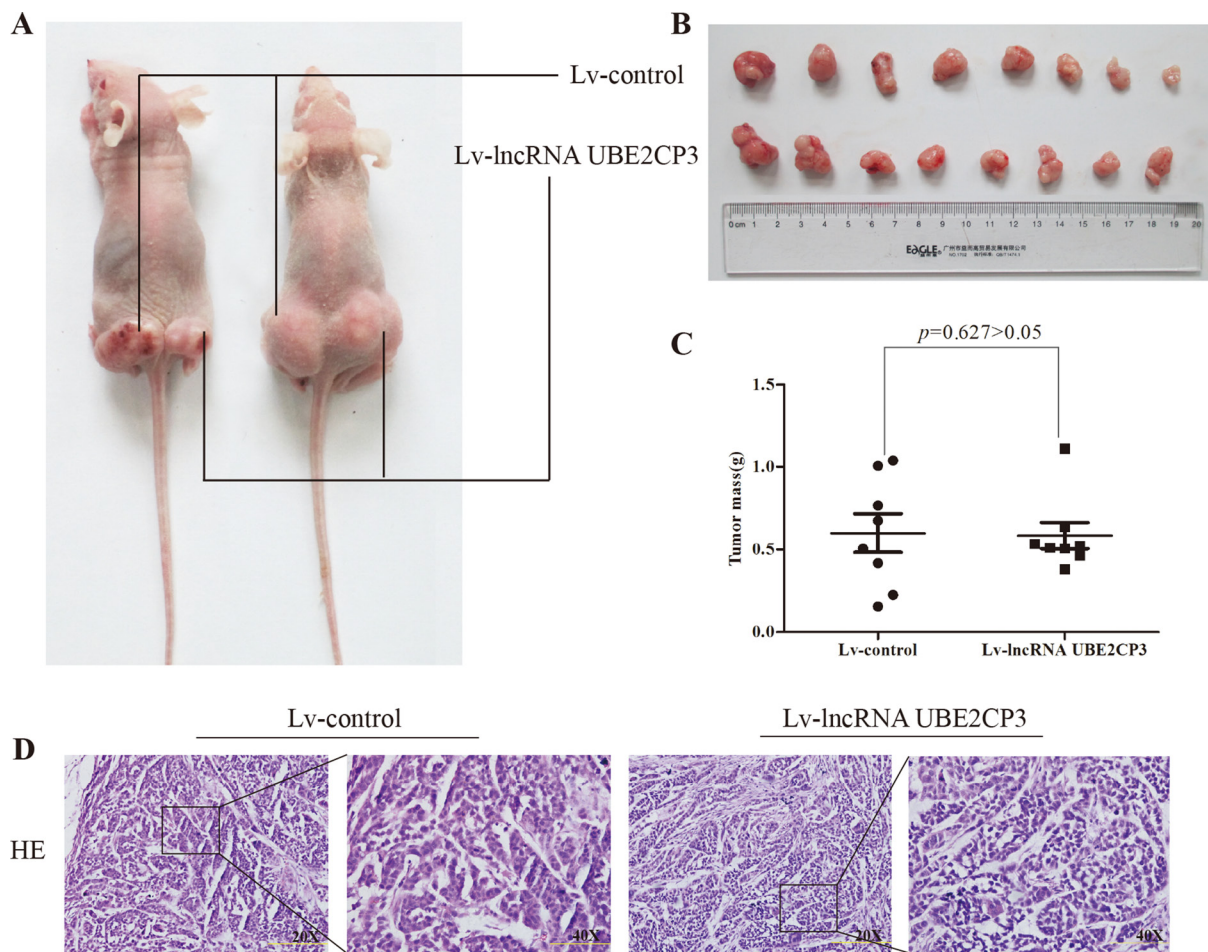


Long non-coding RNA UBE2CP3 promotes tumor metastasis by inducing epithelial-mesenchymal transition in hepatocellular carcinoma

Supplementary Materials



Supplementary Figure 1: LncRNA UBE2CP3 shows no effect on cell proliferation, cell cycle progression and cell apoptosis *in vitro*. (A–B) After over-expression and knockdown of lncRNA UBE2CP3 in HepG2 and SMMC-7721 cells, the cell viability was assessed by CCK-8 assays daily for 4 days. (C–D) Cell cycle analysis of over-expression of lncRNA UBE2CP3 in HepG2 and SMMC-7721 cells. (E–F) Cell apoptosis analysis of over-expression of lncRNA UBE2CP3 in HepG2 and SMMC-7721 cells.



Supplementary Figure 2: LncRNA UBE2CP3 has no effect on tumor growth *in vivo*. (A–B) Photographs of tumors and images that developed in xenograft-transplanted nude mouse tumor models 5 weeks after injection of lncRNA UBE2CP3-over-expressing or control HepG2 cells. (C) Weights of xenografts established by subcutaneous transplantation with Lv-lncRNA UBE2CP3-overexpressing and Lv-control HepG2 cells 5 weeks after cell injection. (D) HE-stained paraffin-embedded sections obtained from xenografts.

Supplementary Table 1: Clinicopathologic characteristics of 80 serum HCC patients

| Feature | N(%) |
|-------------------------|-------------|
| Age,y | |
| < = 55 | 48 (60.0) |
| > 55 | 32 (40.0) |
| Gender | |
| Male | 71 (88.7) |
| Female | 9 (11.3) |
| HBsAg | |
| Positive | 69 (86.2) |
| Negative | 11 (13.8) |
| Tumor size,cm | |
| < = 5 | 39 (48.7) |
| > 5 | 41 (51.3) |
| AFP level, ng/ml | |
| < = 20 | 56 (70.0) |
| > 20 | 24 (30.0) |
| Cirrhosis | |
| Yes | 61 (76.2) |
| No | 19 (23.8) |
| Tumors, n | |
| Solitary | 70 (87.5) |
| Multiple | 10 (12.5) |
| Smoking | |
| Yes | 33 (41.2) |
| No | 47 (58.8) |
| Alcohol | |
| Yes | 24 (30.0) |
| No | 56 (70.0) |

Supplementary Table 2: Sequences of primers and shRNA used in this study

| Name | | Sequences |
|---------------------------------|-----------|---|
| qRT-PCR primers | | |
| lncRNA UBE2CP3 | sense | AAGTGGTCTGCCCTGTATGATG |
| | antisense | GAGCTATCAATGTTGGGTTTGC |
| E-cadherin | sense | GTCCTGGGCAGACTGAATTT |
| | antisense | GACCAAGAAATGGATCTGTGG |
| N-cadherin | sense | TGGACCATCACTCGGCTTA |
| | antisense | ACACTGGCAAACCTTCACG |
| Snail1 | sense | ACCACTATGCCGCGCTCTT |
| | antisense | GGTCGTAGGGCTGCTGGAA |
| β-actin | sense | TGGCACCCAGCACAATGAA |
| | antisense | CTAAGTCATAGTCCGCCTAGAAGCA |
| U6 | sense | CTCGCTTCGGCAGCACA |
| | antisense | AACGCTTCACGAATTTGCGT |
| shRNA sequences | | |
| sh-lncRNA UBE2CP3 | | CCGGCCCAGGGTAATATCTGCCTCTCAAGAGAAGGCAGATATTACCCTGGGTTTTTTTG |

Supplementary Table 3: Information of antibodies used in this study

| Antibody | WB | IHC | Specificity | Company |
|--|--------|-------|-------------------|---------------------------|
| E-cadherin (24E10) | 1:1000 | 1:400 | Rabbit monoclonal | Cell Signaling Technology |
| N-cadherin (D4R1H) | 1:1000 | 1:125 | Rabbit monoclonal | Cell Signaling Technology |
| Snail1 (WL01863) | 1:1000 | / | Rabbit polyclonal | Wanleibio |
| β-actin (bs-0061R) | 1:2000 | / | Rabbit polyclonal | Bioss |

WB, western blot; IHC, immunohistochemistry.