

Supplementary Materials

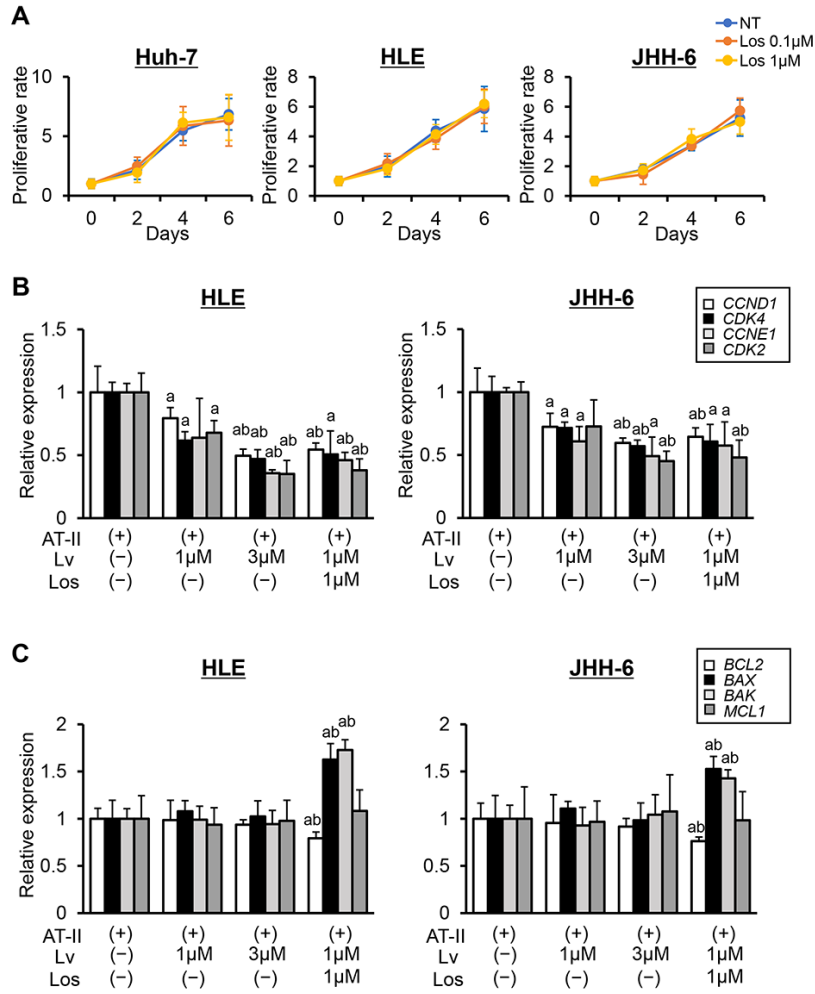


Figure S1. *In vitro* cytostatic effects of lenvatinib and losartan on different HCC cell lines. (A) Cell proliferation of human liver cancer cells (Huh-7, HLE and JHH-6) incubated with losartan (Los) (0, 0.1 and 1 μM) under the condition without stimulation of angiotensin-II (AT-II) for 0-6 days. (B and C) Relative mRNA expression levels of cell cycle-related markers (B) and apoptosis-related markers (C) in HLE and JHH-6. Cells were pre-treated with AT-II (1 μM) for 12 h and subsequently treated with Los (1 μM) and/or lenvatinib (Lv) (1 or 3 μM) for 12 h. The mRNA expression levels were measured by qRT-PCR, and *GAPDH* was used as internal control. Quantitative values are relatively indicated as fold changes to the values of (A) group at the start of treatment with losartan in each dose, (B and C) group of AT-II(+)/Lv(-)/Los(-). Data are mean ± SD (*n* = 3 independent experiments with *n* = 8 samples per condition). ^a*p* < 0.05, ^b*p* < 0.05 compared with group treated with AT-II(+)/Lv(-)/Los(-) and AT-II(+)/Lv(1 μM)/Los(-), respectively (B and C).

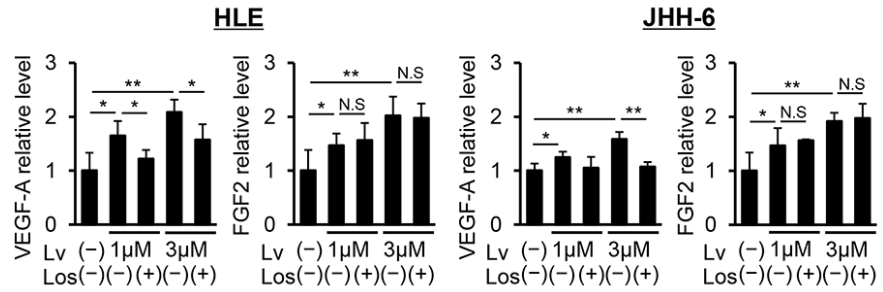


Figure S2. *In vitro* VEGF-A and FGF2 levels in different HCC cell lines treated with lenvatinib and losartan. VEGF-A and FGF2 levels in HLE or JHH-6-cultured media. Cells were treated with Los (1 µM) and/or lenvatinib (Lv) (1 or 3 µM) for 24 h. Quantitative values are relatively indicated as fold changes to the values of group of Los(-)/Lv(-). Quantitative values are relatively indicated as fold changes to the values of group of Los(-)/Lv(-). Data are mean ± SD ($n = 3$ independent experiments with $n = 8$ samples per condition). * $p < 0.05$; ** $p < 0.01$ indicating a significant difference between groups N.S: Not significant.

Table S1. List of primers used in q-PCR.

gene	Sense (5'-3')	Antisense (5'-3')
Mouse		
<i>CD34</i>	GGGTAGCTCTCTGCCTGATG	TCTCTGAGATGGCTGGTGTG
Human		
<i>CCND1</i>	CCCTCGGTGTCCTACTTCAA	CTTAGAGGCCACGAACATGC
<i>CDK4</i>	CCCACACAAGCGAATCTCTG	ACCCTCCATAGCCTCAGAGA
<i>CCNE1</i>	CGCTGATGAAGATGCACACA	ACAGAAGAGAACGTGGAGCA
<i>CDK2</i>	AGGCATGAGGAATCTGGGAG	GAGGTGGACGTCAGAGGAAA
<i>BCL2</i>	CCACGTGGTAAGATCCTCCA	AGAGGCTGGGCACATTTACT
<i>BAX</i>	AACATGGAGCTGCAGAGGAT	CCAATGTCCAGCCCATGATG
<i>BAK</i>	CCAGGACACAGAGGAGGTTT	CTCTGAGTCATAGCGTCCGT
<i>MCL1</i>	AGTAGGAGCTGGTTTGGCAT	TGCTTTTCTGGCTAGGTTGC
<i>VEGF-A</i>	GGGCAGAATCATCACGAAGT	TGGTGATGTTGGACTCCTCA
<i>FGF2</i>	CATGGCTGCAGTTCCTTTGT	TCCTGCCACACAAATTTGCA
<i>CXCL8</i>	CAGTTTTGCCAAGGAGTGCT	ACTTCTCCACAACCCTCTGC