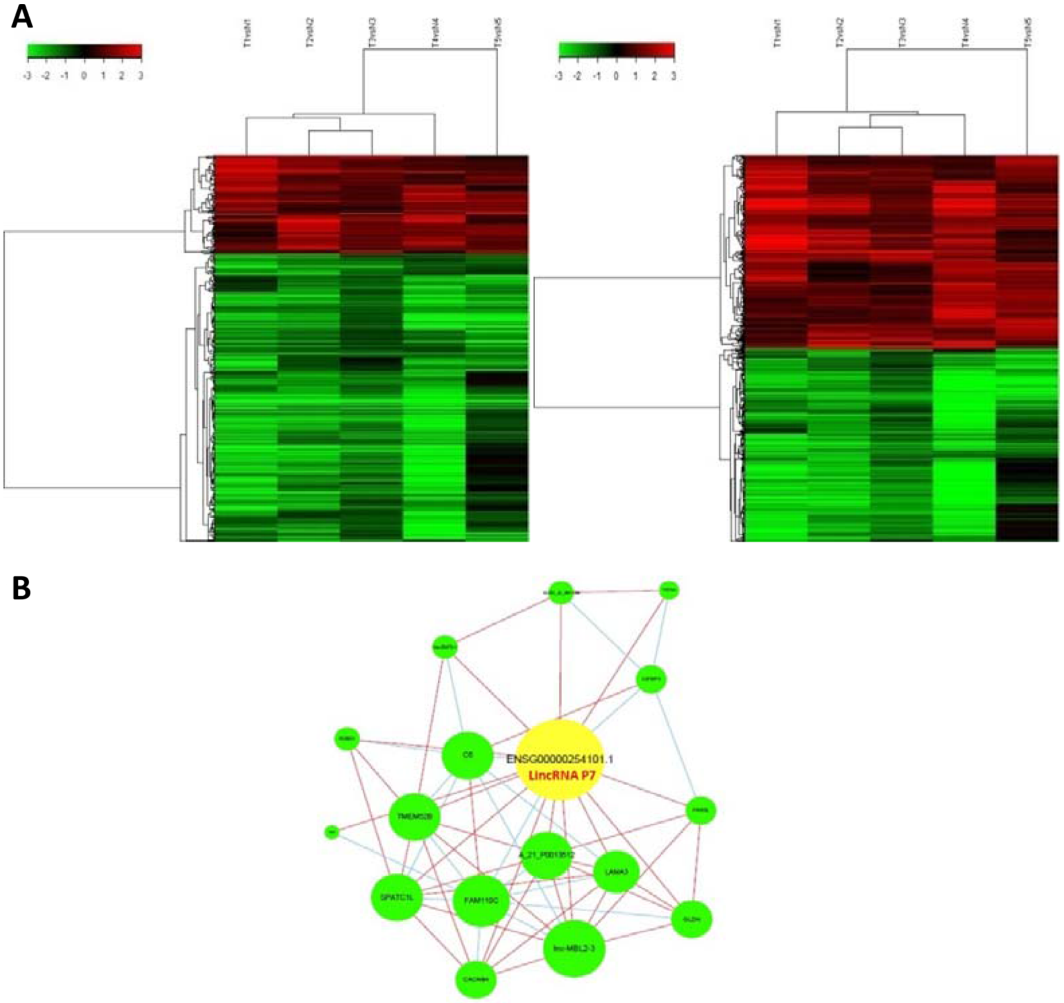
Decreased long intergenic noncoding RNA P7 predicts unfavorable prognosis and promotes tumor proliferation via the modulation of the STAT1-MAPK pathway in hepatocellular carcinoma

SUPPLEMENTARY MATERIALS



C

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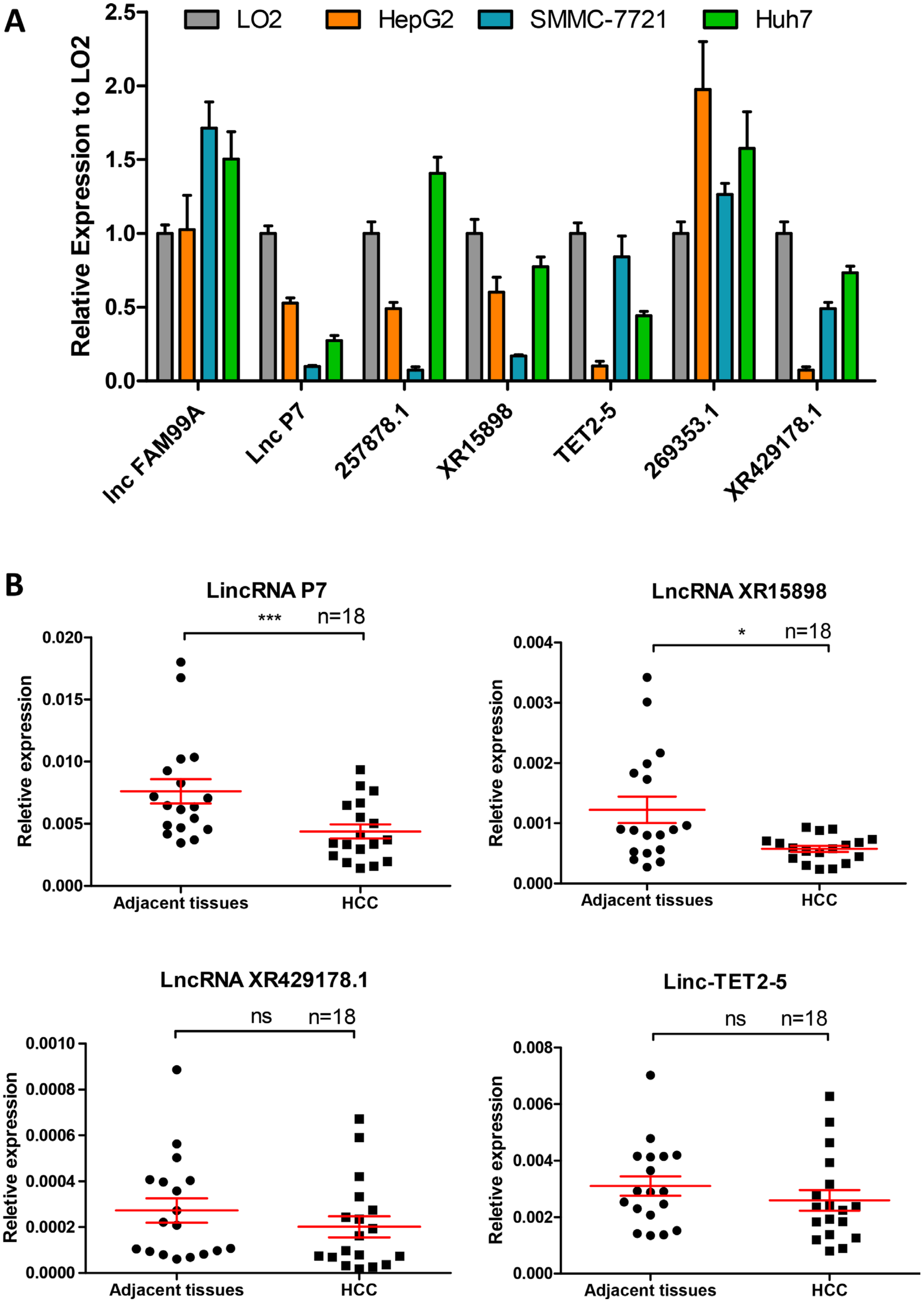
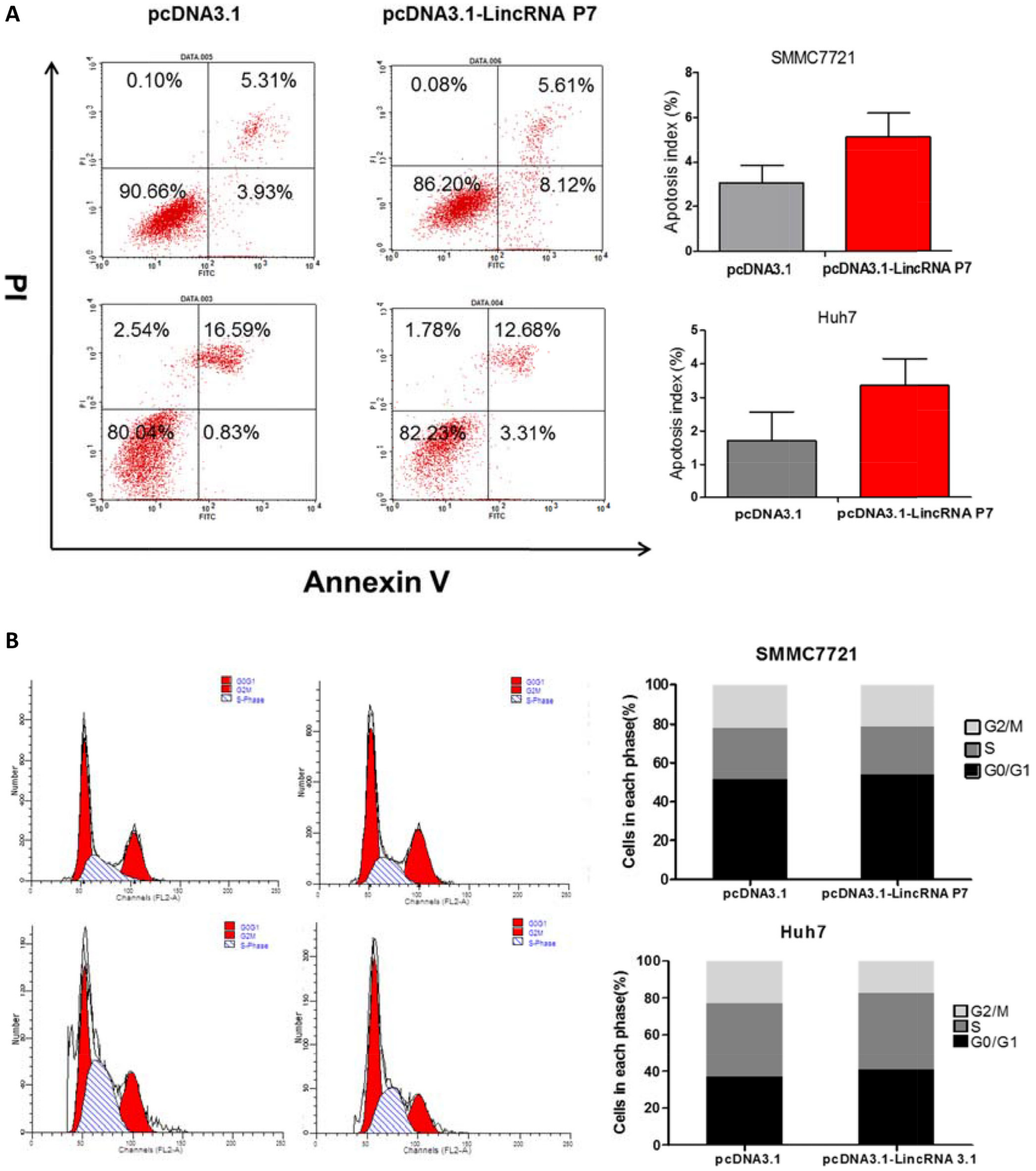
TACGATTCTTCAATCAATGTTTCTGTTTTGTTTATTCTGTTATCTCTGTTGTGTCATACCATAATTCTCTCATTAAT

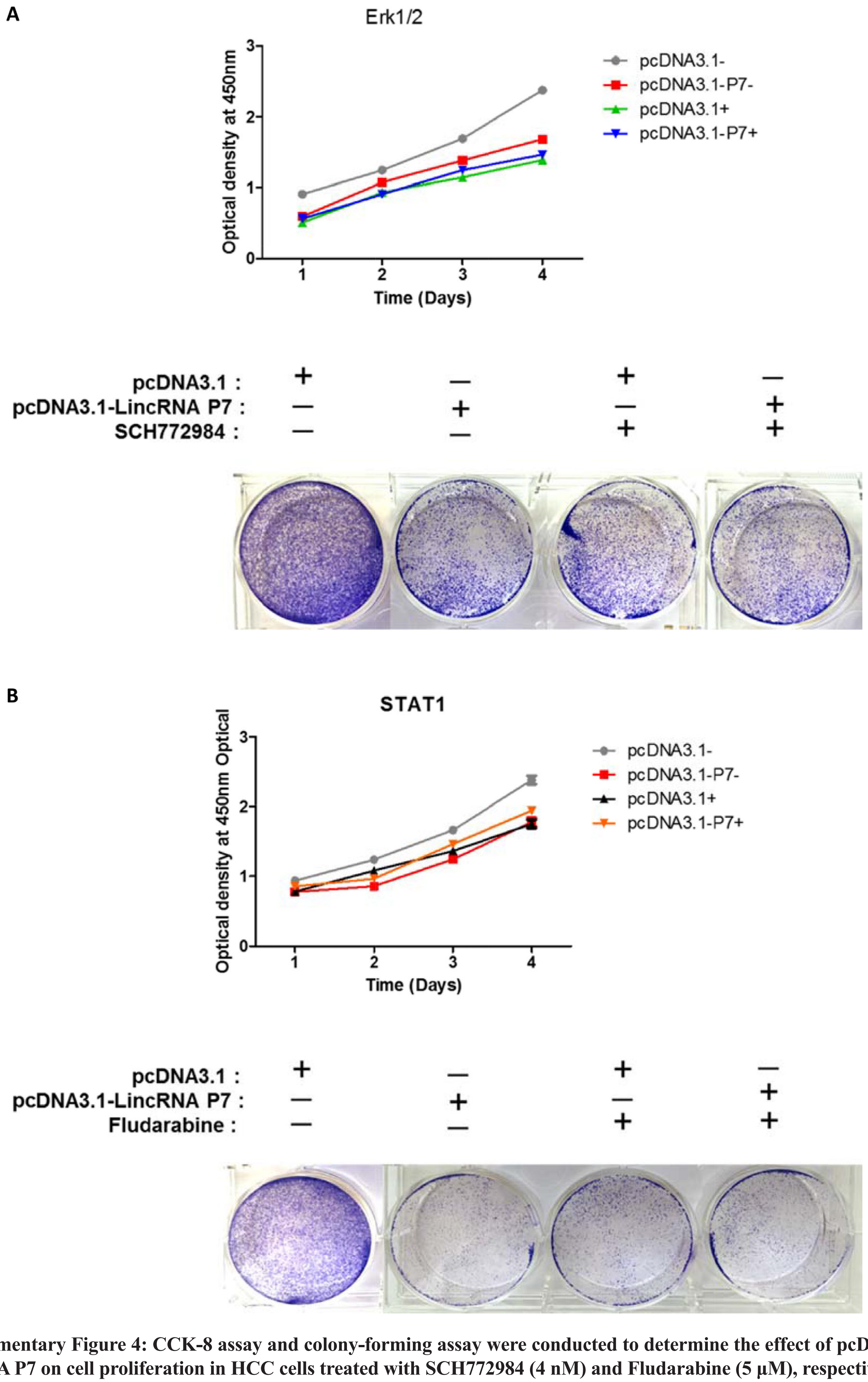
Supplementary Figure 1: (**A**) Hierarchical clustering of 5 HCC tumor tissues and paired adjacent tissues samples using deregulated long noncoding RNAs (fold change > 2). Expression values are indicated as high (red) or low (blue). T represents tumor tissue and N represents adjacent normaltissue. (**B**) Co-expression analysis of lincRNA P7 and mRNA. (**C**) The full sequence of lincRNA P7.



Supplementary Figure 2: (**A**) Relative expression of 7lncRNAs,whose expression levels were significantly correlated with their corresponding 25 mRNAs, in the normal human liver cell line LO2 and in the HCC cell lines HepG2, Huh7 and SMMC-7721. (**B**) 4 lncRNAs whose alterations were consistent with the microarray results were validated in clinical specimens (*n* = 18).



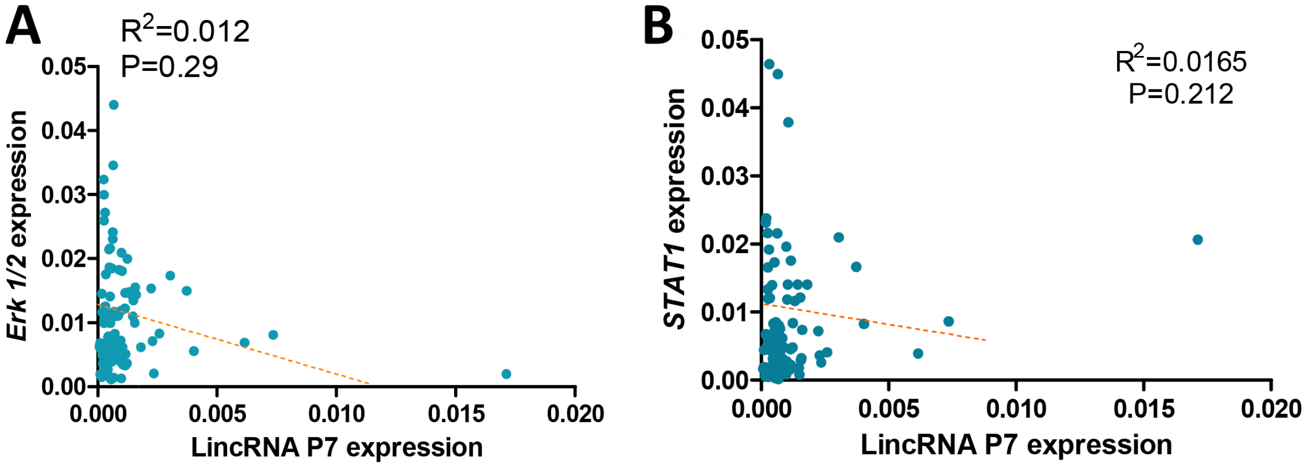
Supplementary Figure 3: Flow cytometry assays were performed to analyze the cell apoptosis (**A**) and the cell cycle (**B**) in SMMC7721 and Huh7 cells transfected with pcDNA3.1-lincRNA P7 for 48 h.



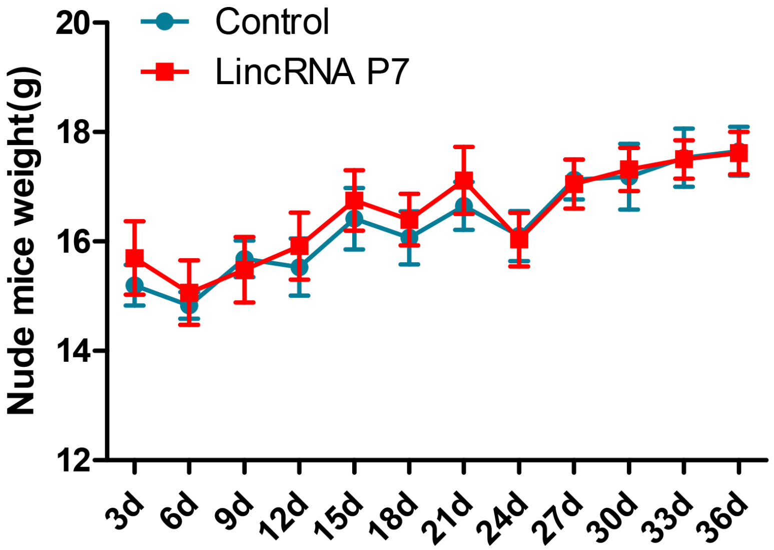
pcDNA3.1 :	+	—	+	—
pcDNA3.1-LincRNA P7 :	—	+	—	+
SCH772984 :	—	—	+	+

pcDNA3.1 :	+	—	+	—
pcDNA3.1-LincRNA P7 :	—	+	—	+
Fludarabine :	—	—	+	+

Supplementary Figure 4: CCK-8 assay and colony-forming assay were conducted to determine the effect of pcDNA3.1-lincRNA P7 on cell proliferation in HCC cells treated with SCH772984 (4 nM) and Fludarabine (5 μM), respectively.



Supplementary Figure 5: Correlations between lincRNA P7 levels and the mRNA levels of ERK (**A**) and STAT1 (**B**) (***n*** = 60). RNA levels were determined by qRT-PCR relative to GAPDH. The r values and P values are derived from Pearson's correlation analysis.



Supplementary Figure 6: SMMC7721 cells (5 × 10^6) that stably expressed lincRNA P7 were inoculated into nude mice, and no significant effect of lincRNA P7 on the weight of the mice was observed. Mice were weighed every 3 days for 42 days (*n* = 6).

Supplementary Table 1: The relationship between lncRNA P7 expression and the clinicopathological features of HCC

Parameters	Group	Total	P7 expression		*P* value
			Low	High	
Gender	Male	88	43	45	0.810
	Female	20	11	9	
Age (years)	< 60	35	19	16	0.681
	≥ 60	73	35	38	
Tumor size (cm)	< 5 cm	62	30	32	0.846
	≥ 5 cm	46	24	22	
AFP	< 20	35	15	20	0.411
	≥ 20	73	39	34	
Histological grade	Well/ModeratePoor	14 94	8 46	6 48	0.776
Clinical stage	I and II	81	37	44	< 0.05
	III	27	17	10	
Tumor number	Solitary	91	43	48	0.290
	Multiple	17	11	6	
Drinking status	Yes	46	21	25	0.999
	No	62	33	39	
Smoking status	Yes	56	26	30	0.563
	No	52	28	24	
HBV	Yes	68	51	17	< 0.001
	No	40	3	37	
Recurrence	Yes	29	19	10	< 0.05
	No	79	35	44	
PVTT	Yes	50	26	24	0.847
	No	58	28	30	
Microvascular invasion	Yes	85	43	42	0.999
	No	23	11	12	
Liver cirrhosis	Absence	61	49	12	< 0.001
	Presence	47	5	42	