

ROCK2 promotes hepatocellular carcinoma metastasis by disturbing MKP1 expression

Table S1. Summary of significantly differentially expressed genes in Huh7-shROCK2 compared with Huh7-shNC cells

Gene name	Fold change	P value
Increased expression		
MKP1	3.512	< 0.001
SHP-1	2.777	0.012
SCARA5	2.521	0.013
PBX1	2.031	0.036
CEBP α	2.012	0.003
GNE	1.983	0.007
C12orf45	1.888	0.012
ALS2CL	1.783	0.018
TLE3	1.566	0.032
ANKRD9	1.508	0.015
Decreased expression		
ATF4	2.212	0.021
MMP2	2.089	0.002
β -catenin	2.043	0.021
MMP9	1.923	0.023
MAFK	1.821	0.013
HOXB9	1.791	0.023
Survivin	1.784	0.012
FAM109A	1.744	0.017
Cyclin D1	1.696	0.022
ER α	1.682	0.017

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Table S2. Relationship between MKP1 expression and clinicopathological features in 132 HCC patients

Parameters	Total case 132	MKP1		P value
		High expression (N=50)	Low expression (N=82)	
Age (years)				P=0.903
< 60	77	30	47	
≥60	55	20	35	
Gender				P=0.796
Female	56	20	36	
Male	76	30	46	
Tumor size (cm)				P=0.858
< 5	66	25	41	
≥5	66	25	41	
HBsAg				P=0.422
Negative	60	20	40	
Positive	72	30	42	
AFP (ng/ml)				P=0.969
< 400	20	8	12	
≥400	112	42	70	
TNM				P=0.942
I/II	80	30	50	
III/IV	52	20	32	
Venous invasion				P < 0.001
Absent	70	10	60	
Present	62	40	22	
Tumor microsatellite formation				P=0.017
Absent	69	19	50	
Present	63	31	32	

HR, hazard ratio; CI, confidence interval.

Table S3. Univariate and multivariate analyses of overall survival in HCC patients

Parameters	Univariate analysis			Multivariate analysis		
	HR	95% CI	P value	HR	95% CI	P value
Age (≥60/< 60)	0.671	0.422-1.784	0.554	-	-	-
Gender (Male/Female)	1.543	0.734-2.356	0.843	-	-	-
Tumor size (< 5/≥5)	1.231	0.652-2.131	0.732	-	-	-
HBsAg (Negative/Positive)	0.769	0.521-1.853	0.698	-	-	-
AFP (ng/ml) (< 400/≥400)	1.621	0.745-2.891	0.864	-	-	-
TNM (I, II/III, IV)	0.975	0.731-2.758	0.688	-	-	-
Venous invasion (Absent/Present)	1.565	1.626-4.533	0.017	1.136	1.076-2.652	0.037
Tumor microsatellite formation (Absent/Present)	2.334	1.664-5.612	0.014	1.363	1.274-3.621	0.026
MKP1 expression (Low/High)	2.642	1.734-6.113	0.005	1.890	1.343-4.791	0.025

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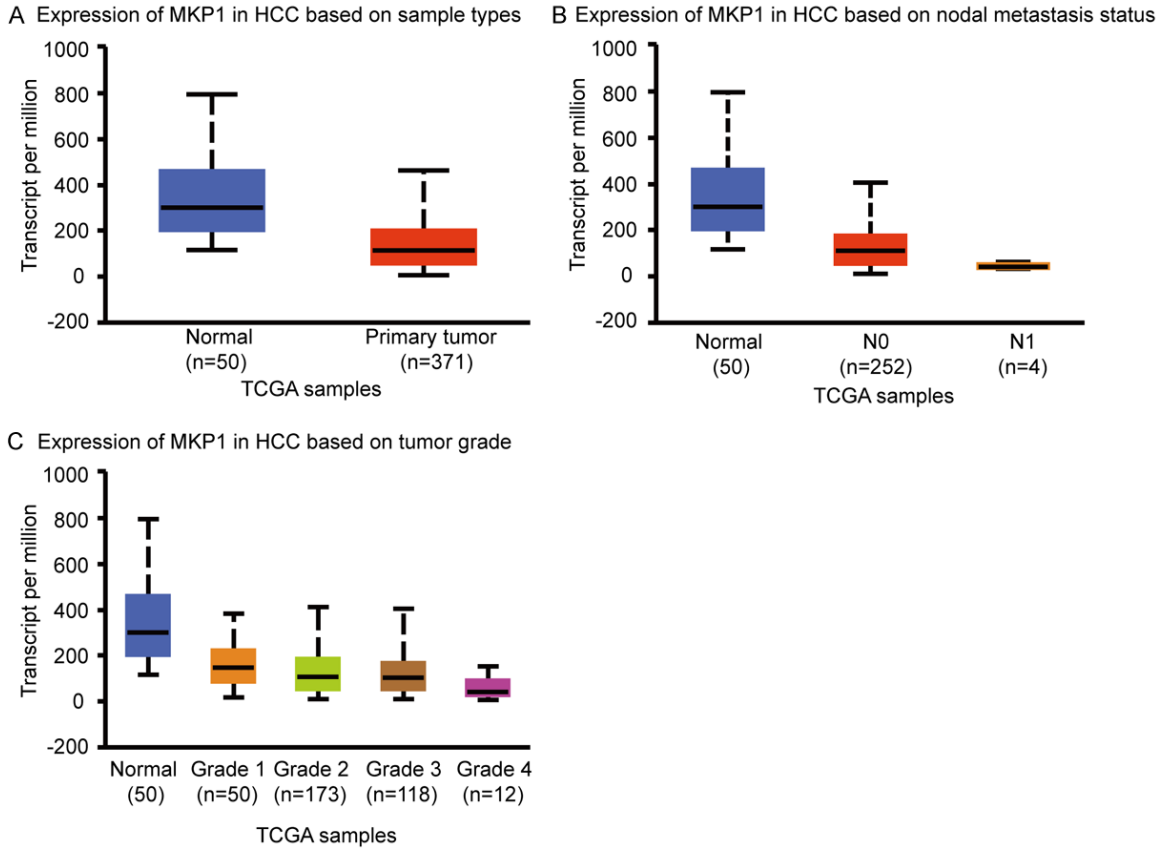


Figure S1. The expression of MKP1 was decreased in HCC tissues. A. Expression of MKP1 was decreased in HCC tissues based on sample type. B. Expression of MKP1 was decreased in HCC tissues based on nodal metastasis statuses. C. Expression of MKP1 was decreased in HCC tissues based on tumor grade.

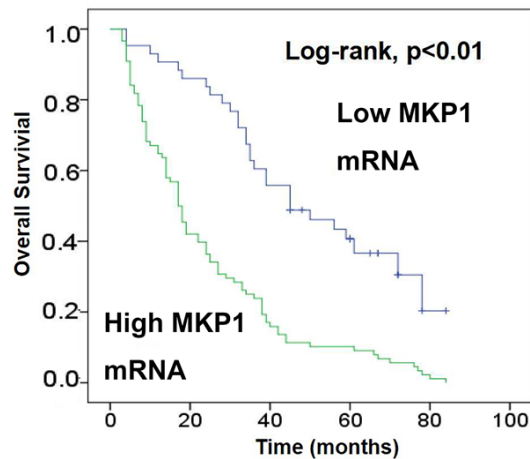


Figure S2. The high mRNA expression of MKP1 was associated with poor outcome of HCC patients. Kaplan-Meier survival curve of 132 patients with HCC (* $P < 0.01$, logarithmic rank test).