

Table S1. Univariate and multivariate analysis of overall survival in 136 HCC specimens

	Univariate analysis			Multivariate analysis		
	Hazard ratio	95% CI	P	Hazard ratio	95% CI	P
Age (years)	1.263	0.692-2.307	0.447			
Gender	1.479	0.562-3.890	0.428			
Tumor size (cm)	3.418	1.332-7.439	0.009*	2.813	1.413-5.598	0.003*
Capsular formation	0.768	0.339-1.742	0.528			
Tumor thrombus	3.458	1.211-9.874	0.020*	3.056	1.370-6.818	0.006*
Tumor nodes	2.594	0.915-7.356	0.073			
Ascites	0.448	0.124-1.610	0.218			
Metastasis	3.692	1.005-13.562	0.049*	2.889	1.376-6.066	0.005*
TMN stage	0.981	0.216-4.461	0.980			
AFP (ng/mL)	0.943	0.474-1.875	0.867			
HBsAg	1.055	0.384-2.903	0.917			
HBcAg	4.850	1.493-15.756	0.009*	3.181	1.187-8.523	0.021*
Cirrhosis	2.098	0.787-5.597	0.139			
ALT (U)	1.297	0.666-2.527	0.444			

AST (U)	1.273	0.614-2.638	0.516			
ALB (g/L)	0.225	0.047-1.067	0.060			
PT (s)	2.218	1.088-4.523	0.028*	2.133	1.124-4.046	0.020*
CACYBP expression	2.596	1.306-5.160	0.006*	3.246	1.794-5.874	<0.001*

*P < 0.05

Abbreviations: AFP, alpha-fetoprotein; ALT, Alanine aminotransferase; ALB: albumin; AST, Aspartate transaminase; HBeAg, hepatitis B e antigen; HBsAg, hepatitis B surface antigen; PT, prothrombin time.

Table S2. Summary of ubiquitination related proteins co-immunoprecipitating with SFB-tagged CACYBP from 293T cells, identified by MALDI-TOF.

Gene Name	Coverage%	Unique Peptide#	Description
CACYBP	89	66	-
RNF41	16	6	E3 ligase
UBB	19	5	Polyubiquitin-B
UBC	6	5	Polyubiquitin-C
STUB1	13	4	E3 ligase
CULLIN1	3	1	Component of E3 ligase complex
TRAF3IP1	2	1	E3 ligase interacting protein

Figure S1

CACYBP

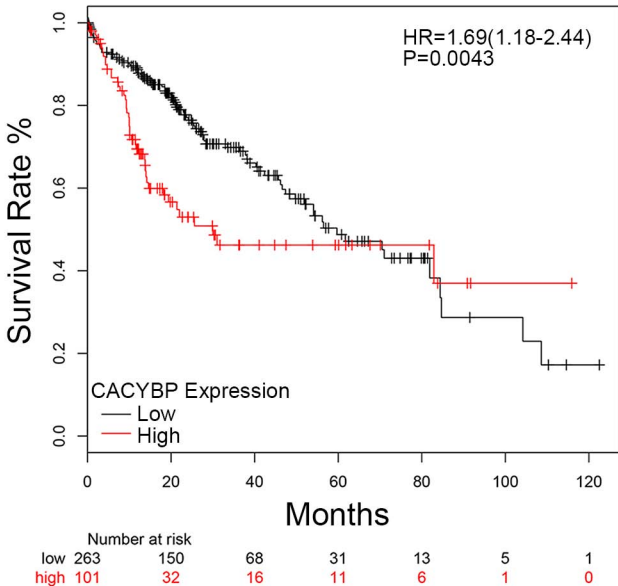


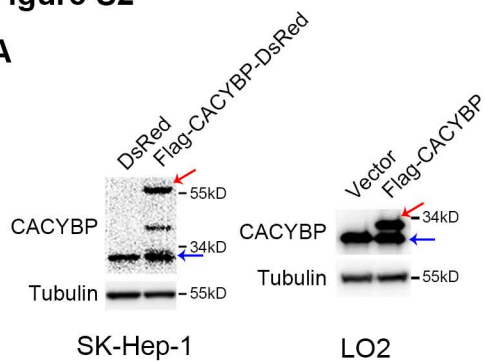
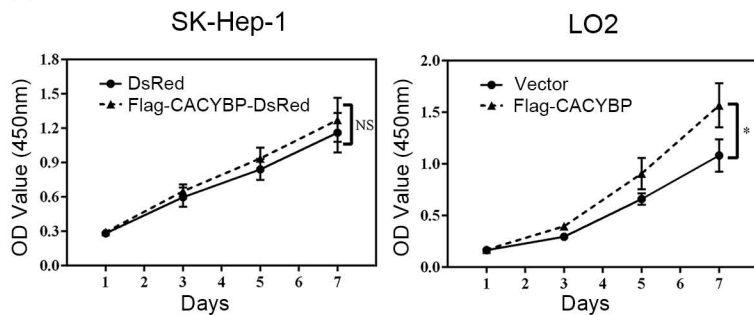
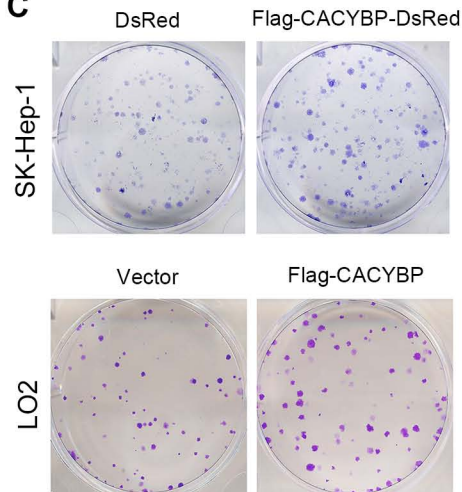
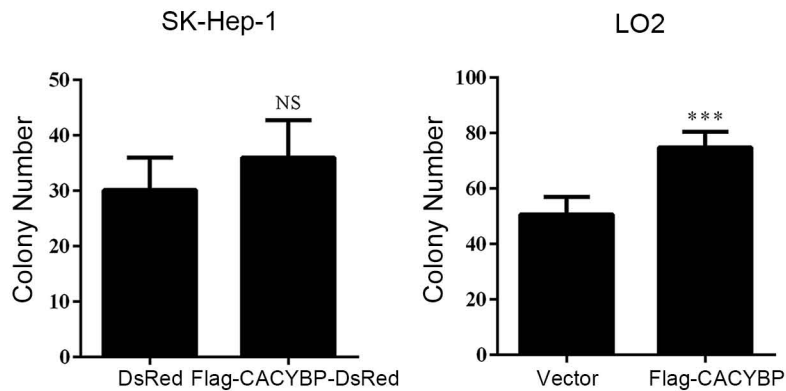
Figure S2**A****B****C****D**

Figure S3

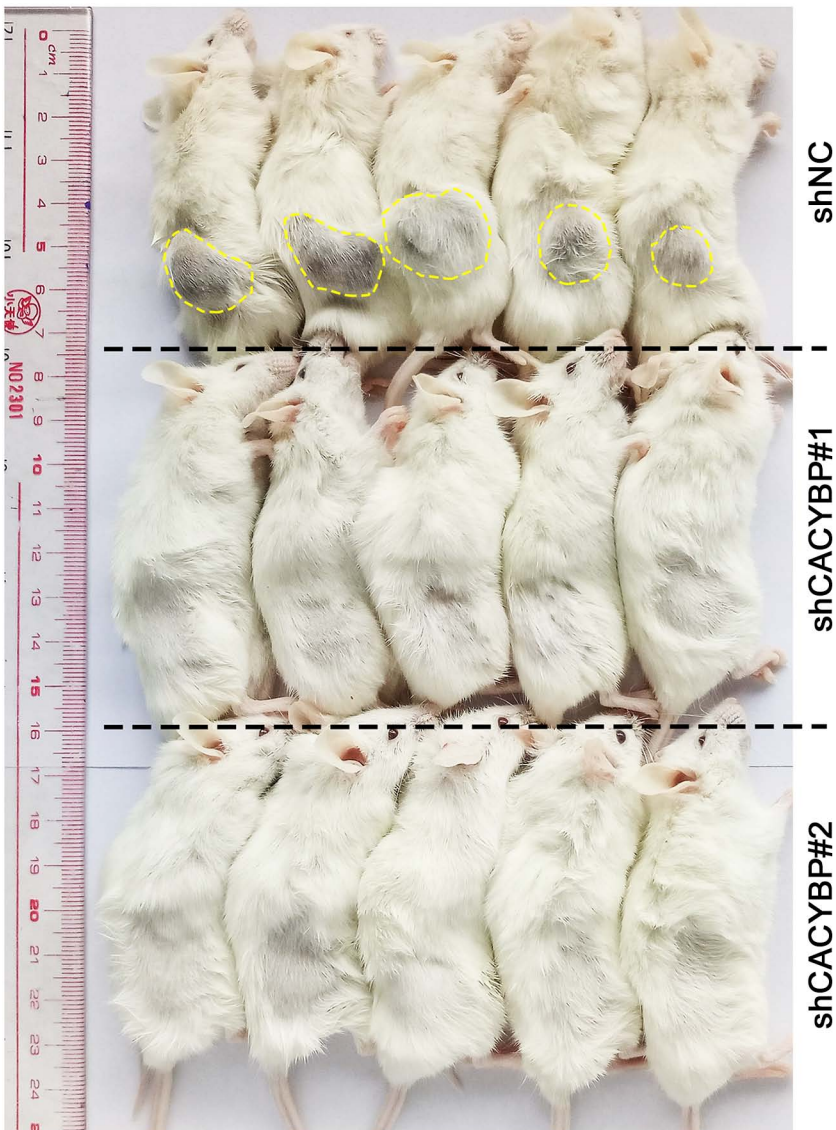
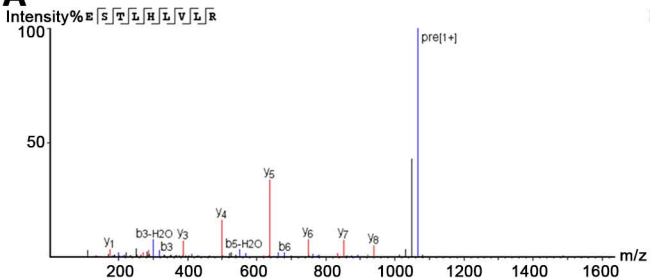
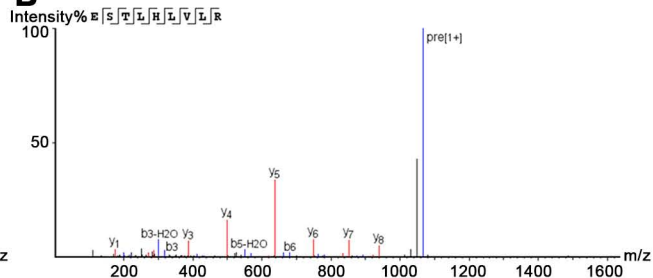


Figure S4

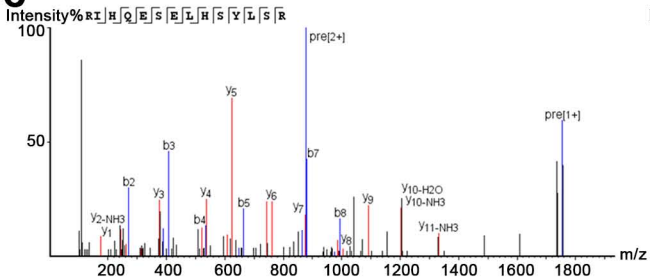
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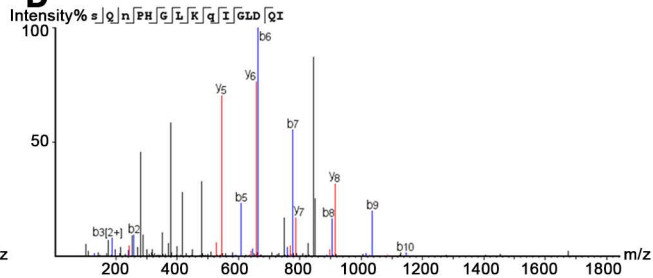
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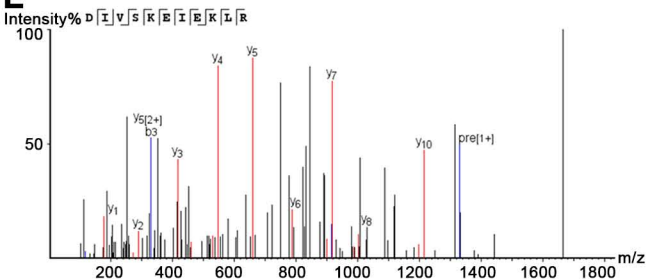
C



D



E



B**B**

shCACYBP#2 shCACYBP#1 shNC

shNC

shCACYBP#1

shCACYBP#2

shNC

shCACYBP#1

shCACYBP#2

shCACYBP#1

shCACYBP#2

DAPI

CACYBP

P27^{Kip1}DAPI+P27^{Kip1}