

**Table S1.** Staining intensity of the SIRT-3 and p-mTOR expression in early-and advantage stage HCC patients.

Intensity	Early-stage HCC patients		Advanced-stage HCC patients	
	SIRT-3 <i>No. patient (%)</i>	p-mTOR <i>No. patient (%)</i>	SIRT-3 <i>No. patient (%)</i>	p-mTOR <i>No. patient (%)</i>
<b>0 (absent)</b>	5 (10.9)	23 (85.2)	4 (19.0)	13 (81.2)
<b>1+ (weak)</b>	10 (21.7)	3 (11.1)	2 (9.5)	2 (12.5)
<b>2+ (moderate)</b>	19 (41.3)	1 (3.7))	6 (28.6)	0
<b>3+ (strong)</b>	12 (26.1)	0	9 (42.9)	1 (6.3)

**Table S2.** Expression of SIRT-3 and p-mTOR in non-cancerous adjacent liver tissue from HCC patients with metabolic dysfunctions.

	Non-cancerous adjacent liver tissue					
	SIRT-3			p-mTOR		
	No. patients	Negative	Slight positive	No. patients	Negative	Slight positive
<b>Presence of diabetes and metabolic syndrome</b>	9	7/9	2/9	5	5/5	0
<b>Only diabetes</b>	8	4/8	4/8	3	3/3	0