

**Table S9: Validation of differential gene expression by quantitative real-time PCR.**

Individual lesions from each liver tumorigenesis stage (hyperplastic liver, HL; hepatocellular carcinoma, HCC) were examined for the expression level of the selected genes. The log<sub>2</sub> fold change obtained from microarray data and RT-PCR for the genes validated are as shown in the table.

No.	Gene symbol		Gene name	Log <sub>2</sub> fold change							
	Zebrafish	Human		Microarray		Quantitative real-time PCR					
				HL	HCC	HL1	HL2	HL3	HCC1	HCC2	HCC3
1	<i>akt2l</i>	<i>AKT2</i>	V-akt murine thymoma viral oncogene homolog 2, like	1.06	2.91	3.54	2.95	2.78	6.75	5.46	6.03
2	<i>angpt1</i>	<i>ANGPT1</i>	Angiopoietin 1	0.12	2.54	0.26	0.73	0.23	1.58	2.34	1.87
3	<i>ccnb1</i>	<i>CCNB1</i>	Cyclin B1	5.48	7.85	5.11	4.12	4.09	9.67	9.46	8.23
4	<i>mapk1</i>	<i>MAPK1</i>	Mitogen-activated protein kinase 1	2.13	2.18	3.28	2.54	4.45	5.79	6.78	6.92
5	<i>mapk3</i>	<i>MAPK3</i>	Mitogen-activated protein kinase 3	2.31	2.64	2.73	1.12	3.67	3.92	4.65	3.75
6	<i>mapk8</i>	<i>MAPK8</i>	Mitogen-activated protein kinase 8	2.09	3.91	2.58	2.56	2.91	4.71	3.56	4.42
7	<i>mdm2</i>	<i>MDM2</i>	Transformed 3T3 cell double minute 2 homolog	5.66	3.07	2.91	3.40	3.66	3.64	4.07	4.54
8	<i>nfya</i>	<i>NFYA</i>	Nuclear transcription factor Y, alpha	6.56	1.74	4.83	5.13	5.76	0.47	0.56	0.91
9	<i>nlk1</i>	<i>NLK</i>	Nemo like kinase b	2.16	2.35	1.02	2.34	2.61	1.64	1.07	1.13
10	<i>rpl19</i>	<i>RPL19</i>	Ribosomal protein 19	1.20	2.81	2.98	1.45	2.76	4.78	4.75	4.12
11	<i>stat3</i>	<i>STAT3</i>	Signal transduction and activation of transcription 3	-1.06	2.53	-0.67	-1.05	0.12	3.76	3.21	2.65
12	<i>stmn1a</i>	<i>STMN1</i>	Stathmin 1a	-1.30	3.93	-0.59	-0.33	-0.67	4.76	4.12	5.23
13	<i>tgfb1</i>	<i>TGFB1</i>	Transforming growth factor, beta 1	0.41	1.88	0.79	0.04	-0.32	3.40	2.11	2.18
14	<i>tp53</i>	<i>TP53</i>	Tumor protein p53	2.47	-3.54	3.55	2.76	4.29	-0.18	-1.12	-1.56
15	<i>zgc:194152</i>	<i>NBN</i>	Nibrin	2.15	2.05	1.54	2.25	2.71	3.76	1.10	1.75