

Supplementary Table1 Clinical features of human samples enrolled in this study

Parameter	Mild fatty liver (<i>n</i> = 10)	Severe fatty liver (<i>n</i> = 10)	<i>P</i> value
Age (yr)	46.81 ± 10.09	50.22 ± 10.24	0.56
Gender			
Male	5	5	1
Female	5	5	
BMI (kg/m ²)	28.34 ± 1.99	28.82 ± 2.63	0.33
ALT (u/L)	73.83 ± 28.80	118.41 ± 27.08	0.03
AST (u/L)	41.50 ± 16.82	72.87 ± 21.44	0.02
GGT (u/L)	66.91 ± 12.23	106.89 ± 21.18	0.01
FPG (mmol/L)	4.5 ± 0.64	5.48 ± 0.80	0.02
TG (mmol/L)	1.78 ± 0.24	2.03 ± 0.32	0.48
LSM (kPa)	9.52 ± 3.62	10.14 ± 3.88	0.27
CAP (dB/m)	286.86 ± 6.98	326.50 ± 8.52	< 0.001

ALT: Alanine aminotransferase; AST: Aspartate aminotransferase; BMI: Body mass index; FPG: Fasting plasma glucose; GGT: Gamma glutamyl transpeptidase; TG: Triglyceride; LSM: Liver stiffness measurement; CAP: Controlled attenuation parameter.

Supplementary Table 2 Primers used in this study

Gene	Primer sequence
miR-1297	F: 5' -CGCCGCCGGG-3' R: 5' -GTCCAGTTGCTGGC-3'
miR-1297 mimics	5'-UUCAAGUAAUUCAGGUG-3'
MicroRNA negative control	5'-UUGUACUACACAAAAGUACUG-3'
PTEN	F: 5'-TGGAAAGGGACGAACTGGTG-3' R: 5'-CATAGCGCCTCTGACTGGGA-3'
si-PTEN	F: 5'-CGACGGGAAGACAAGACAAGTT-3' R: 5'-GCTAGCCTCTGGATTTGACG-3'
α -SMA	F: 5' -TCATGGTCGGTATGGGTCAG-3' R: 5' -CGTTGTAGAAGGTGTGGTGC-3'
PCNA	F: 5'-CCTGCTGGGATATTAGCTCCA-3' R: 5'-CAGCGGTAGGTGTCGAAGC-3'
b-Actin	F: 5' -CATGTACGTTGCTATCCAGGC -3' R: 5' -CTCCTTAATGTCACGCACGAT -3'
U6	F: 5'-GCTTCGGCAGCACATATACTAAAAT-3' R: 5'-CGCTTCACGAATTTGCGTGTTCAT-3'
PTEN wild type	F: 5'-AAACATTTTTTTTTTATCAAGAGGGATAAAACA CCATGAAAATAAACTTGAATAAACTGAAAT-3' , R: 5'-CTAGATTTTCAAGTTTATTCAAGTTTATTTTCAT GGTGTTTTATCCCTCTTGATAAAAAAAAAAATGTTT-3'

PTEN mutant

F:5' -AAACATTTTTTTTTTATCAAGAGGGATAA
AACACCATGAAAATAATGAACTTTAAACTGA
AAT-3'

R: 5'-CTAGATTTTCAGTTTAAAGTTCATTATTTTC
AT
GGTGTTTTATCCCTCTTGATAAAAAAAAAAATGT
TT-3'

Supplementary Table 3 Differentially-expressed microRNAs in the microRNA sequencing

Number	ID	MIR	Fold change_Log2	P value	Regulation
1	hsa-miR-1297	MIMAT0005886	7.812712132	7.17E-08	Up
2	hsa-miR-708-5p	MIMAT0004926	6.212934789	9.10E-45	Up
3	hsa-miR-671-5p	MIMAT0003880	5.821645461	1.81E-14	Up
4	hsa-miR-31-5p	MIMAT0000089	4.697868527	1.62E-10	Up
5	hsa-miR-183-5p	MIMAT0000261	4.233462425	1.24E-05	Up
6	hsa-miR-182-5p	MIMAT0000259	4.097884023	1.87E-07	Up
7	hsa-miR-4791	MIMAT0019963	3.944503492	2.12E-06	Up
8	hsa-miR-185-5p	MIMAT0000455	3.502025379	2.30E-06	Up
9	hsa-miR-17-5p	MIMAT0000070	3.341620887	0.021916563	Up
10	hsa-miR-3529-3p	MIMAT0022741	3.337693082	0.002688337	Up
11	hsa-miR-320a	MIMAT0000510	3.303678341	5.86E-05	Up
12	hsa-miR-99b-5p	MIMAT0000689	2.929221023	0.002685594	Up
13	hsa-miR-186-5p	MIMAT0000456	2.41288949	0.001543846	Up
14	hsa-miR-19a-3	MIMAT0000	2.046459098	0.009762	Up

	p	073		013	
15	hsa-miR-19b-3	MIMAT0000	1.997441811	0.003869	Up
	p	074		111	
16	hsa-miR-7-5p	MIMAT0000	1.845681967	0.009060	Up
		252		427	
17	hsa-miR-27a-3	MIMAT0000	1.701412633	0.020350	Up
	p	084		215	
18	hsa-miR-15b-3	MIMAT0004	1.57607067	1.81E-10	Up
	p	586			
19	hsa-miR-4454	MIMAT0018	1.358651201	8.80E-06	Up
		976			
20	hsa-miR-93-5	MIMAT0000	1.279829311	0.021317	Up
	p	093		234	
21	hsa-miR-574-3	MIMAT0003	-1.268212458	9.33E-23	Down
	p	239			
22	hsa-miR-328-3	MIMAT0000	-1.274779614	0.000383	Down
	p	752		263	
23	hsa-miR-340-5	MIMAT0004	-1.353669254	4.67E-12	Down
	p	692			
24	hsa-miR-338-3	MIMAT0000	-1.424635143	1.06E-11	Down
	p	763			
25	hsa-miR-10b-5	MIMAT0000	-1.442868232	1.25E-07	Down
	p	254			
26	hsa-miR-223-3	MIMAT0000	-1.468583983	4.63E-22	Down
	p	280			
27	hsa-miR-141-3	MIMAT0000	-1.47656685	0.014393	Down
	p	432		564	
28	hsa-miR-218-5	MIMAT0000	-1.499571009	0.031372	Down
	p	275		171	
29	hsa-let-7f-1-3p	MIMAT0004	-1.518467089	0.018642	Down
		486		557	

30	hsa-miR-361-5 p	MIMAT0000 703	-1.571976859	0.001297 49	Down
31	hsa-let-7d-3p	MIMAT0004 484	-1.578521887	2.91E-25	Down
32	hsa-miR-22-5 p	MIMAT0004 495	-1.583563863	0.000167 28	Down
33	hsa-miR-144-3 p	MIMAT0000 436	-1.587664684	5.74E-31	Down
34	hsa-miR-144-5 p	MIMAT0004 600	-1.643143572	0.000873 539	Down
35	hsa-miR-484	MIMAT0002 174	-1.692092375	0.000284 313	Down
36	hsa-miR-107	MIMAT0000 104	-1.693075664	9.35E-05	Down
37	hsa-miR-34c-5 p	MIMAT0000 686	-1.696951937	8.30E-05	Down
38	hsa-miR-145-3 p	MIMAT0004 601	-1.756330919	0.018634 48	Down
39	hsa-miR-99a-5 p	MIMAT0000 097	-1.765014012	1.94E-13	Down
40	hsa-miR-3065- 5p	MIMAT0015 066	-1.833990049	0.005363 177	Down
41	hsa-miR-4508	MIMAT0019 045	-1.853829352	6.58E-06	Down
42	hsa-let-7g-3p	MIMAT0004 584	-1.858723313	0.002157 19	Down
43	hsa-miR-139-5 p	MIMAT0000 250	-1.884287582	2.26E-27	Down
44	hsa-miR-378a- 5p	MIMAT0000 731	-1.926218857	4.72E-15	Down
45	hsa-miR-142-5	MIMAT0000	-1.944555673	1.24E-16	Down

	p	433			
46	hsa-miR-324-5	MIMAT0000	-1.98772167	0.005317	Down
	p	761		083	
47	hsa-miR-874-3	MIMAT0004	-1.99262047	0.010889	Down
	p	911		01	
48	hsa-miR-145-5	MIMAT0000	-2.014721506	3.20E-07	Down
	p	437			
49	hsa-miR-29c-5	MIMAT0004	-2.053637964	0.036399	Down
	p	673		002	
50	hsa-miR-744-5	MIMAT0004	-2.091147888	0.002030	Down
	p	945		906	
51	hsa-miR-203b-	MIMAT0019	-2.117183539	0.009925	Down
	5p	813		142	
52	hsa-miR-194-3	MIMAT0004	-2.144771524	0.024197	Down
	p	671		927	
53	hsa-miR-190a-	MIMAT0000	-2.233797185	0.001803	Down
	5p	458		015	
54	hsa-miR-195-5	MIMAT0000	-2.490747159	0.000151	Down
	p	461		397	
55	hsa-miR-3591-	MIMAT0019	-2.51013183	0.005804	Down
	5p	876		911	
56	hsa-miR-4492	MIMAT0019	-3.074303128	8.35E-34	Down
		027			
57	hsa-miR-378d	MIMAT0018	-3.085575732	1.38E-13	Down
		926			
58	hsa-miR-494-3	MIMAT0002	-3.140481224	0.000117	Down
	p	816		37	
59	hsa-miR-1273	MIMAT0022	-4.969626351	0.046502	Down
	g-3p	742		762	
60	hsa-miR-193a-	MIMAT0000	-6.098032083	0.017939	Down
	3p	459		402	

61	hsa-miR-718	MIMAT0012 735	-6.622051819	0.003572 413	Down
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