

Table S1. MAFLD score of mice liver

	No.	Tissue	Steatosis Grade	Lobular inflammation	Ballooning	MAFLD score
Empty AAV	21294	Left Lobe of the liver	0	1	1	2
		Middle Lobe of the liver	0	1	1	2
		Right Lobe of the liver	0	1	1	2
	Mean		0	1.0	1.0	2.0
	24591	Left Lobe of the liver	1	0	1	2
		Middle Lobe of the liver	0	0	1	1
		Right Lobe of the liver	0	0	1	1
	Mean		0.3	0	1.0	1.3
	24593	Left Lobe of the liver	0	1	1	2
		Middle Lobe of the liver	0	1	0	1
		Right Lobe of the liver	0	1	0	1
	Mean		0.0	1.0	0.3	1.3
	24594	Left Lobe of the liver	0	1	1	2
		Middle Lobe of the liver	0	1	1	2
		Right Lobe of the liver	1	0	1	2
	Mean		0.3	0.7	1.0	2.0
	24595	Left Lobe of the liver	1	0	1	2
		Middle Lobe of the liver	1	1	1	3
		Right Lobe of the liver	0	0	1	1
	Mean		0.7	0.3	1.0	2.0
	24597	Left Lobe of the liver	0	0	1	1
		Middle Lobe of the liver	0	0	1	1
		Right Lobe of the liver	0	1	1	2

		Mean	0.0	0.3	1.0	1.3
AAV-miR-23b	21293	Left Lobe of the liver	0	1	1	2
		Middle Lobe of the liver	0	0	1	1
		Right Lobe of the liver	0	1	1	2
	Mean		0.0	0.7	1.0	1.7
	21295	Left Lobe of the liver	0	1	1	2
		Middle Lobe of the liver	0	1	1	2
		Right Lobe of the liver	0	1	1	2
	Mean		0.0	1.0	1.0	2.0
	24592	Left Lobe of the liver	1	0	1	2
		Middle Lobe of the liver	1	1	1	3
		Right Lobe of the liver	1	0	1	2
	Mean		1.0	0.3	1.0	2.3
	24598	Left Lobe of the liver	1	1	1	3
		Middle Lobe of the liver	1	0	1	2
		Right Lobe of the liver	1	0	1	2
	Mean		1.0	0.3	1.0	2.3
	24596	Left Lobe of the liver	1	1	0	2
		Middle Lobe of the liver	0	1	0	1
		Right Lobe of the liver	1	1	0	2
	Mean		0.7	1.0	0.0	1.7
	24599	Left Lobe of the liver	0	1	1	2
		Middle Lobe of the liver	0	1	1	2
		Right Lobe of the liver	0	0	1	1
	Mean		0.0	0.7	1.0	1.7

Table S2. Partial primer sequence lists

Primer Name	Sequence (5' to 3')	Other_informations
Tnfaip3-for	GAACAGCGATCAGGCCAGG	
Tnfaip3-rev	GGACAGTTGGGTGTCTCACATT	
p21 ^{Cip1} -for	TCCCGACTCTTGACATTGCT	
p21 ^{Cip1} -rev	TGCAGAAGGGGAAGTATGGG	
Ccl2-for	TTAAAAACCTGGATCGGAACCAA	
Ccl2-rev	GCATTAGCTTCAGATTTACGGGT	
Ccl7-for	GCTGCTTTCAGCATCCAAGTG	
Ccl7-rev	CCAGGGACACCGACTACTG	
Cxcl10-for	CCAAGTGCTGCCGTCATTTTC	
Cxcl10-rev	GGCTCGCAGGGATGATTTCAA	
Mmp3-for	ACATGGAGACTTTGTCCCTTTTG	
Mmp3-rev	TTGGCTGAGTGGTAGAGTCCC	
Mmp9-for	CTGGACAGCCAGACACTAAAG	
Mmp9-rev	CTCGCGGCAAGTCTTCAGAG	
Il1b-for	GCAACTGTTTCCTGAACTCAACT	
Il1b-rev	ATCTTTTGGGGTCCGTCAACT	
Il8-for	CAAGGCTGGTCCATGCTCC	
Il8-rev	TGCTATCACTTCCTTTCTGTTGC	
snoRNA U6-for	CTCGCTTCGGCAGCACA	
snoRNA U6-rev	AACGCTTCACGAATTTGCGT	
Actin-for	TGCAGAAGGGGAAGTATGGG	

Actin-rev	TAAAACGCAGCTCAGTAACAGTCCG	
miR-23b-3p- elong Primer	GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACGGTAAT	This elongation primer is used to extend the miRNA sequence, creating a longer template for the subsequent PCR steps. The sequence is complementary to the 3' portion of miR-23b-3p, allowing for specific binding and extension.
miR-23b-3p- forward Primer	GCGATCACATTGCCAGGG	The forward primer is designed to anneal to the extended miRNA sequence provided by the elongation primer. It is used in conjunction with the universal reverse primer to amplify the target miRNA.
Universal miRNA Reverse Primer	CCCAGGGACCTCTCTCTAATC	This primer is used as a common reverse primer for all miRNA qPCR reactions. Its sequence is complementary to the stem-loop structure introduced by the elongation primer, enabling the amplification of the miRNA of interest.