

SUPPLEMENTARY DATA

Supplementary Table 1. Primers for genotyping

Target	Primer	Sequence
rs27910693	Forward	catggtaccacatctacaag
	Reverse	cagttcagtatggtgaggag
rs13476526	Forward	cttgctaggaccacactac
	Reverse	caggttacagaaggcaagag
SNP8*	Forward	catagagtgcccaaatctgc
	Reverse	tgctggtcagtgagtaccaggcatc
rs29504161	Forward	catcccaaattggtatgtaag
	Reverse	gctctagagaaggctgagacttttgatg
rs29541997	Forward	caagtcctgagaacgtggtg
	Reverse	gatcatcccctgatctctgac
rs27909412	Forward	cacacatgccacttcaggctcatac
	Reverse	ggtccttaatcctgtcagact
rs27910675	Forward	ggaattcgataatggaactggacacaac
	Reverse	cggctcgagcctcttggtcccactttag

*The SNP8 is a novel polymorphism in the genomic region amplified by the primers SNP8-forward and SNP8-reverse, and the amplified segment contained 8 and 9 consecutive T in the genome of TSOD and BALB/cA mice, respectively.

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Supplementary Table 2. Primers for quantitative PCR

Gene	Primer	Sequence
ALK7	Forward	atcctcggtttcacgcagc
	Reverse	accattccagccacagtcac
aP2	Forward	aagagaaaacgagatggtgacaa
	Reverse	cttgtggaagtcacgccttt
FATP	Forward	gacaagctggatcaggcaag
	Reverse	gaggccacagaggctgttc
GPAT3	Forward	gtgctgggtgtcctagtgc
	Reverse	aagctgatccaatgaaage
AGPAT2	Forward	gtgctctgctgtccttctc
	Reverse	acgaaccagctgatgatgc
Lipin1	Forward	cccttctatgctgcttttgg
	Reverse	gggacactcccacttgctt
DGAT1	Forward	tcgtggtatcctgaattggtg
	Reverse	aggttctctaaaaataaccttgatt
DGAT2	Forward	ggcgctacttccgagactac
	Reverse	tggtcagcaggttgtgtgc
ATGL	Forward	tgaccatctgcctccaga
	Reverse	tgtaggtggcgcaagaca
HSL	Forward	gcgctggaggagtgtttt
	Reverse	ccgctctccagttgaacc
PPAR α 2	Forward	gttttatgctgttatgggtg
	Reverse	gtaatttctgtgaagtgctcatag
C/EBP α	Forward	aaacaacgcaacgtggaga
	Reverse	gcggtcattgtcactggtc
GDF3	Forward	cgcaggacttatgctacgtg
	Reverse	agacaggagccatcttgaa
36B4	Forward	ggccctgcactctcgtttc
	Reverse	tgccaggacgcgcttgt

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Supplementary Table 3. Primers for cloning, mutagenesis, or shRNAs

Target	Primer	Sequence
WT-ALK7	Forward	ggaattcatgaccccagcgcggctc
	Reverse	ccgctcgagagctttacagtcttccttgac
CA-ALK7 (mutation)	Forward	atcgcaagggatattgtacttcaagaa
	Reverse	gaagtacaatatcccttgcgattgtc
CA-Smad2	Forward	gggaattcgccaccatgtcgtccatcttgcca
CA-Smad2 (mutation)	Reverse	ggctcgagctccatgtcttcgcatcgac
CA-Smad3	Forward	gggaattcgccaccatgtcgtccatcctgccttcacc
CA-Smad3 (mutation)	Reverse	ggctcgagatccacatcgtcacagcggat
Smad4	Forward	ggggaattcgccaccatggacaatatgtctataaca
	Reverse	gggctcgaggtctaaaggctgtgggtccgc
PPAR α 2	Forward	gggggtaccgccaccatgggtgaaactctgggagat
	Reverse	gggctcgagatacaagtctttagatctc
C/EBP α	Forward	ggggaattcatggagtcggccgacttctac
	Reverse	gggctcgagcgcgcagttgcccatggcctt
sh-luciferase		cgtacgcggaataacttca
sh-Smad2		gctgagtgccctaagtata
sh-Smad3		ggattgagctacacctgaa
sh-Smad4		gcaattgagagtttgtaa
sh-PPAR α		gcatttctgctccacacta
sh-C/EBP α		ggagttgaccagtgacaat

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Supplementary Table 4. Primers for luciferase reporter plasmids

Target	Primer	Sequence
ATGL-3979	Forward	gggctcgagcacagcagaggagaagaaaga
ATGL-3570	Forward	gggctcgaggcttgacagtgagggtgtccc
ATGL-2978	Forward	gggctcgagagggtgtgtgcccaaacagcc
ATGL+81	Reverse	gggaagctttcgtgactcgatgtcctgcgg
ATGL□-3570~-2978	Forward	gggtgtgtgcccaaacagcc
	Reverse	taagtggaatagtacctatg
ATGL□-2978~-2478	Forward	cacgcctttaatcccagcac
	Reverse	tcaggctcctgggagatgctg
ATGL□-2478~-1980	Forward	taggaccccggctctcttttc
	Reverse	gccaccaccgcccggctcagaat
ATGL□-1454~-948	Forward	ttcggtgtatgtcaaggctc
	Reverse	gaatggtgccagggtgctt
ATGL□-947~-481	Forward	gttggtttgggggctttagc
	Reverse	agaactcaaaaccagcaaga
ATGL□-2978~-481	Forward	gttggtttgggggctttagc
	Reverse	tcaggctcctgggagatgctg
ATGL□-2978~-1455	Forward	accagctctcactctgctga
	Reverse	tcaggctcctgggagatgctg
ATGL□-1454~-481	Forward	gttggtttgggggctttagc
	Reverse	gaatggtgccagggtgctt
HSL-2091	Forward	gggctcgaggcttacaagtttgattcccag
HSL-1790	Forward	gggctcgagtcccaatcactgtcctcca
HSL-1360	Forward	gggctcgagcatgcttagcacatgggtcc
HSL+1	Reverse	gggagatcttggtagtgccagtagcagcc
HSL□-1790~-1361	Forward	catgcttagcacatgggtcc
	Reverse	tgaagcagtgggaagggtgg
HSL□-1360~-1072	Forward	tcctctgcccttcatgtatt
	Reverse	cgctcctgtgagtgtacccc
HSL□-1071~-857	Forward	acctatctgtgtccgtcctag
	Reverse	cacgaagtagactgaaggcca
HSL□-856~-611	Forward	ggaagttagcggtaagccaag
	Reverse	ttctgtggaggcacagggtc
HSL□-610~-314	Forward	cctgggtcctaagggagaaga
	Reverse	gcagcccacctgccgacagt
HSL□-610~-251	Forward	tgggtccctggtgtaagcaa
	Reverse	gcagcccacctgccgacagt
HSL□-1790~-250	Forward	gggctccctggtgtaagcaa
	Reverse	tgaagcagtgggaagggtgg
HSL□-1790~-1071	Forward	cctctgcccttcatgtatt
	Reverse	tgaagcagtgggaagggtgg
HSL□-1071~-251	Forward	tgggtccctggtgtaagcaa
	Reverse	cacgaagtagactgaaggcca

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Supplementary Table 5. Primers for ChIP assay

Target	Primer	Sequence
ATGL-site1	Forward	gacatgggatttggcttgtt
	Reverse	gcatgtcgcattgtgacaaa
ATGL-site2	Forward	tcacctggctctgcagtcttt
	Reverse	tcctgggtgtggccatattt
ATGL-site3	Forward	ggcttgtgctgcttaagggt
	Reverse	cctctgctctcattccacag
ATGL-site4	Forward	tcaaaccaggatcttcaa
	Reverse	cccaaaaatcaaagggatgc
ATGL-site5	Forward	gctcacatccaagggtttc
	Reverse	cacacgtcatgaggaagctg
ATGL-site6	Forward	agggcccctatgatggttaag
	Reverse	cctatgggctgaaaacctg
HSL-site1	Forward	aaagcagggcaaaggactg
	Reverse	tgggtaagtatggcaggagtg
HSL-site2	Forward	acaacagagaaggccctgaa
	Reverse	tttccatgcagttcgtcac
HSL-site3	Forward	ttaaccaccctgagggtct
	Reverse	gcagagggacacgaagtaga
HSL-site4	Forward	ccctctcccttcatcaatag
	Reverse	acaaatggcaatcagctgtg
HSL-site5	Forward	ggaagtacgggtaagccaag
	Reverse	ggagtccaaaagccgattaag
HSL-site6	Forward	aactggatccccgagtctga
	Reverse	tcctctgctaggttctcc

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Supplementary Table 6. List of antibodies

Antigen	Antibody description	Vendor	Application
ATGL	Rabbit monoclonal	Cell Signaling Technology	immunoblotting
HSL	Rabbit polyclonal	Cell Signaling Technology	immunoblotting
Perilipin A	Rabbit polyclonal	Sigma-Aldrich	immunoblotting
HA	Rat monoclonal	Roche	immunoblotting
phospho-Smad2 (S465/467)	Rabbit monoclonal	Cell Signaling Technology	immunoblotting
Smad2	Mouse monoclonal	Cell Signaling Technology	immunoblotting
phospho-Smad3	Rabbit serum	Millipore	immunoblotting
Smad3	Rabbit monoclonal	Cell Signaling Technology	immunoblotting
Smad4	Rabbit polyclonal	Cell Signaling Technology	immunoblotting
PPAR α	Rabbit polyclonal	Santa Cruz Biotechnology	ChIP, immunoblotting
C/EBP α	Rabbit polyclonal	Santa Cruz Biotechnology	ChIP
C/EBP β	Rabbit polyclonal	Santa Cruz Biotechnology	ChIP
C/EBP δ	Rabbit polyclonal	Santa Cruz Biotechnology	ChIP
PPAR γ	Mouse monoclonal	Santa Cruz Biotechnology	immunoblotting
C/EBP α	Rabbit polyclonal	Cell Signaling Technology	immunoblotting
C/EBP β	Rabbit polyclonal	Cell Signaling Technology	immunoblotting
C/EBP δ	Rabbit polyclonal	Cell Signaling Technology	immunoblotting
FLAG	Mouse monoclonal	Sigma-Aldrich	immunoblotting
FLAG	Rabbit polyclonal	Sigma-Aldrich	immunoblotting
α -tubulin	Mouse monoclonal	Sigma-Aldrich	immunoblotting
α -actin	Mouse monoclonal	Sigma-Aldrich	immunoblotting