

**Supplemental Table 1. Primer sequences used in real-time PCR analysis**

Gene Name (Ensembl ID #)	Sequences
<i>L7a</i> ( <a href="#">ENSRNOT00000006754</a> )	Forward, 5'- GAGGCCAAAAAGGTGGTCAATCC -3' Reverse, 5'- CCTGCCCAATGCCGAAGTTCT -3'
<i>Dkk1</i> ( <a href="#">ENSRNOE00000110838</a> )	Forward, 5'- ATGCCCTCTGACCACAGCCATT -3' Reverse, 5'- CACCGTGGTCATTGCCAAGGT-3'
<i>Lxra</i> ( <a href="#">ENSRNOE00000127993</a> )	Forward, 5'- GCAGTGTATGTGGGGACAAGGC-3' Reverse, 5'- GATGACACTGCCGGCGGAAGA-3'
<i>Ppara</i> ( <a href="#">ENSRNOE00000209259</a> )	Forward, 5'- ATGGCTGAGAAGACGCTTGTGG -3' Reverse, 5'- TCGGACCTCTGCCTCCTTGTT -3'
<i>Adrp</i> ( <a href="#">ENSRNOE00000065739</a> )	Forward, 5'- CCGTAACTGGGGCAAAGGATGT-3' Reverse, 5'- TGCTGGCTACAGAATCCTTGGC-3'
<i>Srebp-1c</i> ( <a href="#">ENSRNOE00000310938</a> )	Forward, 5'- GCTTCTCTGGGCTCCTCTCTGG-3' Reverse, 5'- CAGTGGGTGCCGATGGTGG -3'
<i>Wnt1</i> ( <a href="#">ENSRNOE00000140284</a> )	Forward, 5'- CCCCCTGACCTCTCTGTGTATCAC-3' Reverse, 5'- TGAAGCCCAGGTGTGGTGGTT-3'
<i>Wnt2</i> ( <a href="#">ENSRNOE00000010427</a> )	Forward, 5'- ACCTGATGTAGACGC AAG GGG G-3' Reverse, 5'- AGG TCA AGA GCA GAG GGA GCC A-3'
<i>Wnt2b</i> ( <a href="#">ENSRNOE00000137572</a> )	Forward, 5'- ACC CAG ACA TCA TGC GCT CAG TAG-3' Reverse, 5'- ACG GAA CTG GTG TTG ACA CTC TCG-3'
<i>Wnt3a</i> ( <a href="#">ENSRNOE00000323822</a> )	Forward, 5'- CAA GGC GGG CAT CCA AGA GT-3' Reverse, 5' CTG TTG CTG ACA GTG GTG CAG TTC -3'
<i>Wnt4</i> ( <a href="#">ENSRNOE 00000018064</a> )	Forward, 5'- TGT CTT CGG GAA GGT GGT GAC AC-3' Reverse, 5'- CAA AGG CCA CAC CTG CTG AAG AG-3'
<i>Wnt8b</i> ( <a href="#">ENSRNOE00000132073</a> )	Forward, 5'- GGC AAT TTC CAA GCA GTT TGT GG-3' Reverse, 5'- TCG TTG TTG TGC AGA TTC ATG GC-3'
<i>Wnt9a</i> ( <a href="#">ENSRNOE00000445728</a> )	Forward, 5'- CGC AGG TGT CAC CGA GAG AAG A-3' Reverse, 5'- TGT CAC CAC ACG GCT CTG TGT G-3'
<i>Wnt9b</i> ( <a href="#">ENSRNOE00000035906</a> )	Forward, 5'- CACGGCTGTCAAAGTGTCCAGTG-3' Reverse, 5'- CACCAGGTTTTGCAGGTACCCAC-3'
<i>Wnt11</i> ( <a href="#">ENSRNOE00000434171</a> )	Forward, 5'- CCC TGG AAA CGA AGT GTA AGT GCC-3' Reverse, 5'- GAG CTC TTG TAG CCC CTT CCA ACA-3'
<i>sfrp1</i> ( <a href="#">ENSRNOE00000170873</a> )	Forward, 5'- TCC TAT CAG AGC GGG CGC TT-3' Reverse, 5'- TGT GGC ACA GCC GCA GGT-3'
<i>sfrp2</i> ( <a href="#">ENSRNOE00000012658</a> )	Forward, 5'- TGC CAC GGC ATC GAG TAC CA-3' Reverse, 5'- GCT CCA GCA CCT CCT TCA TGG T-3'
<i>sfrp4</i> ( <a href="#">ENSRNOT00000183030</a> )	Forward, 5'- ACT GCG AGC CCC TCA TGA AGA T-3' Reverse, 5'- ACG GTC ATA GAC AGG CAG CTC ATC-3'
<i>Sfrp5</i> ( <a href="#">ENSRNOE00000143167</a> )	Forward, 5'- TCC TAC TCC AAG CCA CCG CAG T-3' Reverse, 5'- ATG CGC TTG TAG CCC ACT GTG T-3'

**Supplemental Table 2. Statistical analysis of interactions between diet and genotype**

	Main Effects (P values)		
	Genotype (lean vs obese)	Diet (casein vs soy)	Genotype x diet
<b>Histology Evaluation</b>			
Hepatocellular vacuolation	<0.0001	0.035	0.199
<b>Liver functions</b>			
AST	<0.0001	0.050	0.087
ALT	<0.0001	0.842	0.488
<b>Lipid Profile</b>			
ORO quantification	<0.0001	0.011	0.018
NEFA	0.0053	0.055	0.467
TAG	<0.0001	0.098	0.094
<b>Transcript</b>			
<i>LXR<math>\alpha</math></i>	0.0797	0.7709	0.9798
<i>PPAR<math>\alpha</math></i>	0.0043	0.9382	0.6418
<i>SREBP1-c</i>	<0.0001	0.0136	0.3549
<i>ADRP</i>	<0.0001	0.0657	0.0705
<i>Wnt 1</i>	0.9829	0.1616	0.213
<i>Wnt 2</i>	0.0023	0.2549	0.3045
<i>Wnt 2b</i>	0.9956	0.0889	0.0997
<i>Wnt 3a</i>	0.7305	0.7583	0.3423
<i>Wnt 4</i>	0.0331	0.0172	0.0072
<i>Wnt 8b</i>	0.2954	0.1887	0.1452
<i>Wnt 9a</i>	0.0012	0.0215	0.2375
<i>Wnt 9b</i>	0.0121	0.9095	0.0078
<i>Wnt 11</i>	0.8988	0.8331	0.0259
<i>SFRP 1</i>	0.6128	0.6892	0.0547
<i>SFRP 2</i>	0.3237	0.3668	0.3898
<i>SFRP 4</i>	0.0147	0.3557	0.0562
<i>SFRP 5</i>	0.289	0.6599	0.0479
<i>DKK1</i>	0.3211	0.2491	0.1044
<b>Western blot</b>			
$\beta$ -catenin	0.0576	0.1183	0.0032
P- $\beta$ -catenin	0.034	0.0139	0.4996