

SUPPLEMENTARY MATERIAL

Global mRNA and Long Non-Coding RNA Expression in the Placenta and White Adipose Tissue of Mice Fed a High-Fat Diet During Pregnancy

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Supplementary Data:

Supplementary Table 1. The sequences of primers for qPCR

m18s	GCACTGGCAAGTTCTACTGCAA	GTAGGTGAAGAGAACGGCCTTGT
mPRAP1	TGAGCCATCTTCGCAGTC	CATAGAGTGGGCGAGGTG
mSerpina3n	GGGATGATCAAGGAACTGGTCT	CCGCGTAGAACTCAGACTTGAA
mGuca2b	AGGAGATGTCCAATCCCCAG	ACAGTTCACATTCGTCGGTGG
mMuc16	CCAAT CTACT GTACG GAGAACATG	CATAG AGACT GTCCT GATCC AG
mPrI7b1	GGGAGGACGTGGTCTCTGTA	TTTGGTGATTGAGTGGCAA
mAldh1a3	ATCAACAACGACTGGCACGAA	CACATCGGGCTTATCTCCTTC
mClec1b	AACATCAAGCCCCGAAACAA	GCCACGAGTCCAACAACCA
mTfr	GTTTCTGCCAGCCCCTTATTAT	GCAAGGAAAGGATATGCAGCA
mPrI7c1	ATGTCAAACCTACTCCAGTGGG	TCATGTGCTTATGGTCCTTGAGA
mMest	AGAGTGGTGGGTCCAAGTAGG	AAGCACAACTATCTCAGGGCT
m1110059M19Rik	TGATGCAGATGTCTGGACCC	TTGCTAGGGACTCTTCCTCAATA
m Peg3	TCATGCACACTAGGGAGAACC	GGCAGCACTCCTACTGAAGG
mVtn1	CATCGCACTCATCATTGGCTT	TTGAACTCGTGGACCAAACCT
mVnn1	AACTGGATACCCTGTGATAACCC	GTCTCCCATGTTGCCACAA
m Elovl6	GAAAAGCAGTTCAACGAGAACG	AGATGCCGACCACCAAAGATA
m Acly	ACCCTTTCACTGGGGATCACA	GACAGGGATCAGGATTTCTTG
m Gys2	CGCTCCTGTGCGGTGACATC	CATCGGCTGTCGTTTGGC
m Gm6484	CCTGTGGACCTTAGCATCAGC	GCTCTGTCATAGAGGCCAG
mSlc15a1	CCGGAACTGGGGTGGATTTTC	GTCCATCTCTTAGAGGGAAGT
NONMMUT068206	CCTGTGCATCAGAGTCTT	GTGAAGTTGTAGTCTTATCC
NONMMUT068202	CATTGTGCCTTCTTCATCA	GAGGTTGGAGATGGTGAA
NONMMUT068204	CAATCAACTTCACCATCT	TTGTAGGACATTCTCAGT
NONMMUT073434	AGCATAATGTCTATCTGGATT	GCAGGAGATTGAGTTGAA
NONMMUT068207	ACATTGGAGAAGTAACAT	GTAGTCATTGAAGGATAAC
XR_140468	GAAGCCATTAGAGAATAAGAA	TACCAAGTCATTGTCAGT
NONMMUT021632	CAGAGATACTGGAGGAAC	TTGCTGACAGGTATGATT

ENSMUST00000082683	CCATACCACCTTGAATGT	CTACAGCACTCCGTATTC
NONMMUT016106	CAGTCTGACTTGTTCTTCTCT	CTGAAGGCTGACGAATCC
NONMMUT005697	GGAGTAGAATGGTAATGGT	GGTTAGAAGGTGAGACATA
NONMMUT040834	TTACAGTTCGCACAACAG	TTTCTCTATTTCTCCCTTTC
ENSMUST00000121379	GCGTAAGACATCACCTTG	CAGCATCCAGTTGAAGAC
XR_141088	CTCTGTGCTTCTGCTCTAT	TCTTCTCTTCTCTTCTCTCTC
XR_141492	CGTTGTCTGTTCTGTGTT	AATAGTGCCTCGTTGTCT
ENSMUST00000122178	AGCCAGACTGTATCATTA	CAGGTTACAAGAGAACAC
ENSMUST00000098689	AGTAGGACTGGCTCTTAG	TTGACCGTGATGTTGTTG

Supplementary Table 2: Differentially upregulated and downregulated mRNAs (FC $\geq$ 1.3) in the placenta between the HFD and chow groups

Gene Symbol	Fold Change	p-value	q-value	Gene Symbol	Fold Change	p-value	q-value
Prap1	4.266459	0.030633	0.53471	Acta2	1.441981	0.020331	0.338931
Serpina3n	4.073544	0.004643	0.338931	Dnase1l3	1.43758	0.006305	0.494054
Pbbp	3.883555	0.010269	0.406769	Fbn1	1.435321	0.010184	0.494054
Guca2b	2.15974	0.008104	0.406769	Gm11115	1.420184	0.005891	0.338931
Actg2	2.104614	0.007735	0.406769	Ccl7	1.415803	0.000185	0.406769
Dpt	2.021738	0.031881	0.53471	Samd5	1.411667	1.00E-04	0.338931
Muc16	2.014879	0.009142	0.406769	Lox	1.409473	0.004844	0.130454
Mal	2.004461	0.001975	0.260908	Figf	1.40769	0.001379	0.001234
Mmp10	1.926851	0.007819	0.406769	Gm9817	1.398743	0.000964	0.338931
Gfpt2	1.885752	0.003009	0.292313	Fbln2	1.396949	0.001722	0.260908
Col1a1	1.846402	0.003646	0.330483	Lilrb4	1.38876	0.026397	0.260908
Aspn	1.832471	0.027956	0.494054	Gzmf	1.383365	0.028803	0.260908
Fbn2	1.806418	0.007129	0.338931	Upk3bl	1.3819	0.011102	0.494054
Cnn1	1.792628	0.023565	0.494054	Pla1a	1.379875	0.005712	0.53471
Tgfb1	1.790035	0.000122	0.000121	Olfml2b	1.375716	0.001165	0.444066
Cpa3	1.748499	0.017391	0.494054	Ttll2	1.368101	0.003432	0.338931
P4ha3	1.72887	0.003245	0.292313	Gzme	1.362294	0.026887	0.260908
Tagln	1.708009	0.024389	0.494054	Mmp13	1.351687	0.009935	0.292313
Cnfn	1.680862	0.014224	0.444066	Gzmc	1.329699	0.015351	0.494054
Pdlim3	1.672264	0.000238	0.130454	Cbr2	1.325672	0.006073	0.406769
Postn	1.667325	0.001494	0.260908	Rsph4a	1.322292	0.003147	0.444066
Gm9992	1.66007	0.005503	0.338931	Timp1	1.321125	0.002554	0.338931
Dynap	1.638032	0.015601	0.444066	Gm8597	1.320325	0.018576	0.292313
Mmp12	1.631759	0.00304	0.292313	Enpp1	1.300494	0.012968	0.260908
Serpina3g	1.624435	0.015008	0.444066	Dmrtc1a	-1.33604	0.000555	0.494054
Sfrp4	1.601635	0.014901	0.444066	Ctse	-1.35794	0.000314	0.444066
Serpina3k	1.593155	0.00745	0.406769	Cxcl13	-1.37324	0.028852	0.330483
Pgm5	1.584835	0.012429	0.444066	4930430D24Rik	-1.41112	0.00022	0.330483
Mmp19	1.573786	0.000978	0.260908	Vcan	-1.42539	0.022482	0.812281
Mgp	1.567275	0.000457	0.140685	Mfsd2a	-1.42739	0.001134	0.330483
Unc93a	1.566795	0.005481	0.338931	Pcdh12	-1.44003	0.002211	0.713463
Tnc	1.545742	0.026945	0.494054	Clec12b	-1.44548	0.012233	0.330483
Col1a2	1.527553	0.008086	0.406769	Igfbp1	-1.46538	0.016028	0.338931
Myh11	1.523386	0.030745	0.53471	Dgkk	-1.50223	0.00365	0.582346
Has2	1.516785	0.020589	0.494054	Rgs5	-1.52889	0.007521	0.672103
Nov	1.503625	0.000256	0.130454	Aldh1a3	-1.64423	0.029146	0.444066
Ccl2	1.49494	0.00455	0.338931	Pr17b1	-1.66963	0.004216	0.53471
Myl9	1.491078	0.010487	0.406769	Tfrc	-1.69924	0.008991	0.812281
Cpa4	1.4812	0.010318	0.406769	Clec1b	-1.97402	0.002626	0.444066
Dsg3	1.469769	0.016772	0.494054	Pr17c1	-2.46683	0.000519	0.53471

Supplementary Table 3: Differentially upregulated and downregulated lncRNA (FC≥1.3) in placenta between HFD and chow groups

Accession Number	Fold Change	p-value	q-value	Accession Number	Fold Change	p-value	q-value
NONMMUT068203	5.05	0.000174	0.176471	NONMMUT059097	-1.30	0.004142	0.685311
NONMMUT068206	4.30	0.000151	0.176471	ENSMUST00000082422	-1.30	0.044972	0.918427
NONMMUT068202	3.73	0.000308	0.4375	ENSMUST00000093689	-1.31	0.000329	0.296296
NONMMUT068204	3.20	0.000394	0.4375	ENSMUST00000180091	-1.31	4.30E-05	0.176471
NONMMUT073434	1.78	0.000144	0.176471	NONMMUT057186	-1.31	0.000268	0.296296
NR_037240	1.65	0.006335	0.569519	KnowTID_00006321	-1.31	5.70E-05	0.176471
NONMMUT068207	1.61	0.001265	0.453704	ENSMUST00000083959	-1.33	0.000146	0.184211
NONMMUT061960	1.50	3.90E-05	0	XR_141491	-1.34	0.020195	0.918427
XR_141484	1.45	0.003859	0.569519	NONMMUT030928	-1.34	0.00637	0.916407
uc029vpd.1	1.44	0.002238	0.453704	ENSMUST00000117999	-1.36	0.000102	0.176471
uc029rbm.1	1.44	0.002448	0.569519	NONMMUT027791	-1.36	0.001361	0.596244
ENSMUST00000122472	1.43	0.017317	0.629825	ENSMUST00000179019	-1.36	0.00013	0.184211
uc029ttu.1	1.42	0.0446	0.721121	NR_030703	-1.36	0.000813	0.453704
NONMMUT053228	1.40	0.003724	0.569519	NONMMUT002280	-1.36	0.009336	0.917362
uc029rbs.1	1.40	0.004167	0.569519	ENSMUST00000082398	-1.37	0.002888	0.656904
KnowTID_00004718	1.39	0.000387	0.4375	ENSMUST00000177688	-1.37	9.50E-05	0.176471
KnowTID_00001740	1.39	0.007402	0.569519	uc029rtc.1	-1.44	0.000352	0.296296
NONMMUT051200	1.36	0.022071	0.681045	uc011xoc.2	-1.49	0.001093	0.453704
KnowTID_00007861	1.34	3.60E-05	0	uc029rgz.1	-1.49	0.001093	0.453704
NONMMUT055574	1.33	0.005078	0.569519	ENSMUST00000083173	-1.49	6.70E-05	0.176471
uc029wpx.1	1.33	0.01277	0.596244	NONMMUT021632	-1.59	0.013985	0.917833
XR_140491	1.33	0.00017	0.176471	XR_140468	-1.60	0.000322	0.296296
NONMMUT011994	1.31	0.001489	0.453704	ENSMUST00000082683	-1.62	9.70E-05	0.176471
NONMMUT032491	1.30	0.00399	0.569519	uc029rgc.1	-1.74	0.006006	0.916407
KnowTID_00004626	1.30	5.00E-05	0	uc029rhg.1	-1.74	0.006006	0.916407
NONMMUT052382	1.30	0.001281	0.453704	KnowTID_00007050	-1.30	0.000139	0.176471
NONMMUT068203	5.05	0.000174	0.176471	NONMMUT059097	-1.50	0.004142	0.685311
NONMMUT068206	4.30	0.000151	0.176471	ENSMUST00000082422	-1.40	0.044972	0.918427
NONMMUT068202	3.73	0.000308	0.4375	ENSMUST00000093689	-1.35	0.000329	0.296296
NONMMUT068204	3.20	0.000394	0.4375	ENSMUST00000180091	-1.34	4.30E-05	0.176471
NONMMUT073434	1.78	0.000144	0.176471	NONMMUT057186	-1.34	0.000268	0.296296
NR_037240	1.65	0.006335	0.569519	KnowTID_00006321	-1.33	5.70E-05	0.176471
NONMMUT068207	1.61	0.001265	0.453704	ENSMUST00000083959	-1.33	0.000146	0.184211
NONMMUT061960	1.50	3.90E-05	0	XR_141491	-1.34	0.020195	0.918427
XR_141484	1.45	0.003859	0.569519	NONMMUT030928	-1.34	0.00637	0.916407
KnowTID_00007050	1.30	0.000139	0.176471				

Supplementary Table 4: Differentially upregulated and downregulated mRNAs (FC $\geq$ 1.5) in gonadal fat tissue between HFD and chow groups

Gene Symbol	Fold Change	p-value	q-value	Gene Symbol	Fold Change	p-value	q-value
Mest	2.99	0.0021	0.061548	Gprn3	1.59	0.0218	0.325299
1110059M19Rik	2.60	0.0023	0.075335	Nnat	1.59	0.0006	0.038611
Peg3	2.51	0.0002	0.034587	Abat	1.58	0.0098	0.25672
Vnn1	2.30	0.0102	0.25672	Pamr1	1.58	0.0041	0.119566
Serpine1	2.30	0.0188	0.289407	Sulf2	1.58	0.0005	0.038611
Vtcn1	2.26	0.0497	0.405401	Hbb-bs	1.58	0.0307	0.325299
Thbs2	2.20	0.0056	0.139054	Arrdc3	1.57	0.0307	0.325299
Thbs1	2.19	0.0151	0.289407	Cpa3	1.57	0.0291	0.325299
Emp1	2.11	0.0020	0.061548	8430408G22Rik	1.56	0.0181	0.289407
Kcne4	2.10	0.0388	0.361771	Abcc3	1.55	0.0019	0.061548
Zim1	2.04	0.0157	0.289407	Sncg	1.55	0.0016	0.052306
Mmp11	1.95	0.0016	0.052306	Tpsb2	1.55	0.0282	0.325299
Htra4	1.93	0.0007	0.038611	Sfrp4	1.55	0.0183	0.289407
Abcg1	1.92	0.0012	0.04852	Sulf1	1.55	0.0057	0.163669
Prelp	1.89	0.0009	0.041151	Arhgef37	1.54	0.0008	0.041151
Pmepa1	1.88	0.0004	0.034587	Sfrp5	1.54	0.0222	0.325299
Synpo2	1.75	0.0280	0.325299	Col14a1	1.53	0.0034	0.104449
Igfbp3	1.74	0.0468	0.405401	Cdkn1a	1.53	0.0165	0.289407
Hmgcs2	1.73	0.0131	0.289407	C4a	1.52	0.0046	0.119566
Lmod1	1.72	0.0368	0.361771	Akr1c18	1.52	0.0289	0.325299
Hbb-bt	1.71	0.0373	0.361771	Muc16	1.50	0.0107	0.25672
Mcpt4	1.71	0.0203	0.325299	Map6	-1.51	0.0077	0.042107
Hba-a1	1.70	0.0328	0.361771	Uqcr10	-1.51	0.0112	0.04852
Map3k7cl	1.70	0.0468	0.405401	Ndufs4	-1.51	0.0036	0.042107
C1qtnf3	1.69	0.0281	0.325299	Alcam	-1.51	0.0084	0.042107
Rarres2	1.68	0.0001	0.034587	Tmem79	-1.52	0.0030	0.042107
Itih5	1.67	0.0006	0.038611	Sccpdh	-1.52	0.0009	0.042107
Srpx2	1.66	0.0007	0.038611	Taldo1	-1.52	0.0042	0.042107
Saa3	1.66	0.0081	0.226473	Cyb5b	-1.52	0.0025	0.042107
Jun	1.64	0.0451	0.405401	Mapk8ip1	-1.52	0.0104	0.046748
Klf14	1.64	0.0373	0.361771	Mrps22	-1.53	0.0085	0.042107
Ifi27l2a	1.64	0.0109	0.25672	Dhcr7	-1.53	0.0010	0.042107
Lims2	1.64	0.0006	0.038611	Cycs	-1.53	0.0011	0.042107
Ccl12	1.63	0.0071	0.193361	Gpt	-1.54	0.0094	0.046748
Tagln	1.62	0.0475	0.405401	Igfals	-1.55	0.0308	0.087992
Cdkl4	1.61	0.0422	0.361771	Ralgapa2	-1.55	0.0097	0.046748
Ear2	1.61	0.0064	0.163669	Sc4mol	-1.55	0.0016	0.042107
Hba-a1	1.60	0.0297	0.325299	Klb	-1.55	0.0091	0.046748
Gpr156	1.60	0.0002	0.034587	Pcx	-1.55	0.0101	0.046748
C4b	1.59	0.0060	0.163669	Coasy	-1.56	0.0050	0.042107

Gene Symbol	Fold Change	p-value	q-value	Gene Symbol	Fold Change	p-value	q-value
Dhcr24	-1.56	0.0104	0.046748	Dennd2d	-1.73	0.0037	0.042107
Nudt7	-1.57	0.0169	0.052306	Oscp1	-1.75	0.0096	0.046748
Haus7	-1.57	0.0013	0.042107	Nudt7	-1.75	0.0010	0.042107
Prdx3	-1.58	0.0004	0.012224	Ppp1r1a	-1.76	0.0044	0.042107
Angpt1	-1.58	0.0046	0.042107	Mup6	-1.76	0.0002	0.012224
Sqle	-1.59	0.0114	0.04852	Mc5r	-1.77	0.0027	0.042107
Xrcc3	-1.59	0.0024	0.042107	Strip2	-1.78	0.0026	0.042107
Tst	-1.59	0.0440	0.104449	1-Mar	-1.79	0.0262	0.075335
C2cd2l	-1.60	0.0010	0.042107	2010003K11Rik	-1.80	0.0189	0.061548
Cisd3	-1.60	0.0053	0.042107	Mrap	-1.81	0.0008	0.042107
Olfr735	-1.60	0.0001	0.012224	Adcy10	-1.81	0.0178	0.061548
B3galt1	-1.61	0.0046	0.042107	GlrX	-1.83	0.0005	0.036972
Fam110c	-1.61	0.0104	0.046748	Echdc1	-1.83	0.0015	0.042107
Dhrs7	-1.61	0.0019	0.042107	Mup20	-1.84	0.0012	0.042107
Fbxo45	-1.61	0.0060	0.042107	Kcnj15	-1.87	0.0001	0.012224
Tmem120b	-1.61	0.0085	0.042107	Aacs	-1.88	0.0085	0.042107
Rorc	-1.62	0.0046	0.042107	Pygl	-1.89	0.0030	0.042107
B3galtl	-1.62	0.0016	0.042107	Lss	-1.91	0.0012	0.042107
Pgd	-1.62	0.0015	0.042107	1-Mar	-1.91	0.0237	0.075335
Pdhx	-1.63	0.0047	0.042107	Slc25a10	-1.92	0.0057	0.042107
Pex11a	-1.64	0.0091	0.046748	Rgs16	-1.92	0.0003	0.012224
Pdha1	-1.65	0.0002	0.012224	Slc25a1	-1.92	0.0065	0.042107
Cpeb2	-1.65	0.0157	0.052306	Pmvk	-1.92	0.0011	0.042107
Agpat2	-1.65	0.0067	0.042107	Acat2	-1.92	0.0007	0.042107
Mpc2	-1.65	0.0035	0.042107	Thrsp	-1.92	0.0061	0.042107
Cdkn2c	-1.65	0.0031	0.042107	Nsdhl	-1.94	0.0026	0.042107
Dlat	-1.66	0.0019	0.042107	Orm1	-1.95	0.0029	0.042107
Nat8l	-1.67	0.0136	0.04852	A530016L24Rik	-1.95	0.0169	0.052306
Egln3	-1.67	0.0015	0.042107	Gpd2	-1.96	0.0009	0.042107
Lrrc39	-1.68	0.0117	0.04852	Aldh1a7	-2.01	0.0024	0.042107
Trhde	-1.68	0.0237	0.075335	Pdhb	-2.01	0.0005	0.036972
Cth	-1.68	0.0037	0.042107	Fasn	-2.02	0.0166	0.052306
Nudt7	-1.69	0.0021	0.042107	Gbe1	-2.03	0.0018	0.042107
Snhg11	-1.69	0.0019	0.042107	Mup4	-2.05	0.0002	0.012224
Gm20267	-1.69	0.0046	0.042107	Odf3l1	-2.05	0.0038	0.042107
Tfrc	-1.69	0.0043	0.042107	Acacb	-2.05	0.0174	0.052306
Ptges	-1.69	0.0072	0.042107	Idi1	-2.06	0.0013	0.042107
Mogat2	-1.70	0.0261	0.075335	Gsta3	-2.06	0.0050	0.042107
Pdk1	-1.70	0.0005	0.036972	Acaca	-2.06	0.0073	0.042107
Mpc1	-1.70	0.0007	0.042107	Mup7	-2.08	0.0016	0.042107
Acat3	-1.71	0.0008	0.042107	Pnpla3	-2.09	0.0117	0.04852
Slc25a35	-1.71	0.0059	0.042107	Gpd1	-2.09	0.0068	0.042107
Nrn1	-1.72	0.0114	0.04852	Parm1	-2.09	0.0020	0.042107

Gene Symbol	Fold Change	p-value	q-value	Gene Symbol	Fold Change	p-value	q-value
Insig1	-2.10	0.0044	0.042107	Enpep	-2.26	0.0011	0.042107
Mup5	-2.11	0.0010	0.042107	LOC100861909	-2.29	0.0013	0.042107
Clstn2	-2.12	0.0022	0.042107	Mup1	-2.30	0.0018	0.042107
Me1	-2.13	0.0034	0.042107	Mup15	-2.35	0.0017	0.042107
Cyp51	-2.13	0.0006	0.042107	Fdps	-2.37	0.0025	0.042107
Fabp5	-2.15	0.0016	0.042107	Orm2	-2.42	0.0011	0.042107
Slc2a5	-2.16	0.0027	0.042107	Sorl1	-2.50	0.0048	0.042107
Mup19	-2.16	0.0025	0.042107	Orm3	-2.51	0.0008	0.042107
Mmd2	-2.17	0.0067	0.042107	Tlcd2	-2.55	0.0026	0.042107
Mup12	-2.17	0.0022	0.042107	Mup3	-2.63	0.0003	0.012224
Mup9	-2.19	0.0014	0.042107	Acss2	-2.67	0.0026	0.042107
Mup2	-2.19	0.0024	0.042107	Cldn22	-2.69	0.0176	0.052306
Mup20	-2.20	0.0004	0.012224	Slc15a5	-2.82	0.0064	0.042107
Heph1	-2.20	0.0078	0.042107	Gm6484	-2.99	0.0025	0.042107
Atp1a3	-2.23	0.0002	0.012224	Igk	-3.04	0.0084	0.042107
Mup2	-2.25	0.0018	0.042107	Gys2	-3.10	0.0032	0.042107
Mup21	-2.25	0.0002	0.012224	Acly	-3.17	0.0026	0.042107
Tkt	-2.26	0.0051	0.042107	Elovl6	-4.39	0.0042	0.042107

Supplementary Table 5: Differentially upregulated and downregulated lncRNAs (FC $\geq$ 1.5) in the fat tissue between the HFD and chow groups

Probe Set ID	Fold Change	p-value	q-value	Probe Set ID	Fold Change	p-value	q-value
TC1200002634.mm.1	2.46	5.50E-05	0.022831	TC1000001874.mm.1	1.51	0.03941	0.707814
TC1000000969.mm.1	2.24	0.000708	0.37186	TC0100000744.mm.1	1.51	0.021189	0.707814
TC0700000086.mm.1	2.13	0.000193	0.102094	TC0500002917.mm.1	-1.51	0.000249	0.022831
TC0600002383.mm.1	2.07	0.001892	0.706899	TC1300001668.mm.1	-1.51	0.000874	0.07075
TC1000002193.mm.1	2.05	0.00027	0.110611	TC0M00000020.mm.1	-1.51	0.002586	0.086741
TC0200002412.mm.1	2.01	2.70E-05	0	TC1800000483.mm.1	-1.51	0.002884	0.086741
TC0900000072.mm.1	1.91	0.024911	0.707814	TC0600000248.mm.1	-1.51	0.003709	0.102094
TC0600002384.mm.1	1.91	0.001725	0.706899	TC1300002555.mm.1	-1.52	0.004245	0.102094
TC1900001402.mm.1	1.89	5.00E-05	0.022831	TC0700003295.mm.1	-1.52	0.040134	0.309088
TC0600003320.mm.1	1.84	0.006664	0.707068	TC0700003298.mm.1	-1.52	0.040134	0.309088
TC1500001237.mm.1	1.78	0.012794	0.707814	TC0700003303.mm.1	-1.52	0.040134	0.309088
TC0700001506.mm.1	1.78	0.021053	0.707814	TC0700003306.mm.1	-1.52	0.040134	0.309088
TC1700001698.mm.1	1.77	0.008342	0.70727	TC1200000135.mm.1	-1.53	0.000722	0.07075
TC1100003398.mm.1	1.73	0.012279	0.707814	TC1100001188.mm.1	-1.55	0.000401	0.061382
TC0700002215.mm.1	1.71	0.001368	0.706899	TC0800001810.mm.1	-1.55	0.002172	0.076938
TC1200000733.mm.1	1.69	0.033972	0.707814	TC1600001729.mm.1	-1.55	0.002984	0.086741
TC1000002192.mm.1	1.69	0.000862	0.469427	TC1600000986.mm.1	-1.56	0.000588	0.07075
TC1000001003.mm.1	1.69	0.003719	0.706899	TC1600002127.mm.1	-1.56	0.000137	0.02035
TC1600000798.mm.1	1.67	0.001052	0.706899	TC0200004964.mm.1	-1.57	0.000188	0.02035
TC0600001106.mm.1	1.66	0.002659	0.706899	TC0900001245.mm.1	-1.57	0.000944	0.07075
TC1700001694.mm.1	1.65	0.004823	0.706899	TC0600000125.mm.1	-1.60	0.017487	0.197563
TC1_GL456210_random 00000005.mm.1	1.63	0.000306	0.110611	TC0700001334.mm.1	-1.60	0.00188	0.076938
TC1_GL456211_random 00000005.mm.1	1.63	0.000306	0.110611	TC0100003286.mm.1	-1.63	0.000584	0.07075
TC1_GL456211_random 00000026.mm.1	1.63	0.000306	0.110611	TC1600001723.mm.1	-1.63	0.000813	0.07075
TC1_GL456221_random 00000004.mm.1	1.63	0.000306	0.110611	TC1500001453.mm.1	-1.63	0.000525	0.061584
TC0300001470.mm.1	1.63	0.004084	0.706899	TC0900002781.mm.1	-1.63	0.005162	0.110611
TC1900001401.mm.1	1.62	6.20E-05	0.022831	TC0100001856.mm.1	-1.64	0.003043	0.086741
TC1000000959.mm.1	1.62	0.035678	0.707814	TC0X00003121.mm.1	-1.66	0.000373	0.022831
TC1700002133.mm.1	1.61	0.003808	0.706899	TC1200001894.mm.1	-1.68	0.00057	0.061584
TC1100002474.mm.1	1.60	0.021479	0.707814	TC1300002556.mm.1	-1.68	0.00316	0.086741
TC0900002441.mm.1	1.59	0.002846	0.706899	TC0600003193.mm.1	-1.70	0.001586	0.076938
TC1100000066.mm.1	1.58	0.036806	0.707814	TC0900000009.mm.1	-1.70	0.001586	0.076938
TC1400000457.mm.1	1.55	0.000738	0.37186	TC0400002778.mm.1	-1.72	0.00028	0.022831
TC1200001034.mm.1	1.55	0.028385	0.707814	TC0400003270.mm.1	-1.73	0.000811	0.07075
TC1000001001.mm.1	1.54	0.021858	0.707814	TC0400000685.mm.1	-1.74	9.90E-05	0.02035
TC1000000728.mm.1	1.52	0.000326	0.110611	TC1000000995.mm.1	-1.75	0.001555	0.07075
TC0900001805.mm.1	1.51862	0.00272	0.706899	TC0400000676.mm.1	-1.78352	0.000172	0.02035

Probe Set ID	Fold Change	p-value	q-value	Probe Set ID	Fold Change	p-value	q-value
TC0400000678.mm.1	-1.78	0.00013	0.02035	TC1800000050.mm.1	-2.22	0.000413	0.061382
TC0100002234.mm.1	-1.79	3.20E-05	0	TC0200003548.mm.1	-2.22	0.000135	0.02035
TC1000002644.mm.1	-1.79	8.50E-05	0.02035	TC0400002775.mm.1	-2.28	3.90E-05	0
TC0300002278.mm.1	-1.79	0.000923	0.07075	TC0200004450.mm.1	-2.33	0.000202	0.02035
TC1100000824.mm.1	-1.81	0.000198	0.02035	TC1100000642.mm.1	-2.33	8.10E-05	0.02035
TC0400000677.mm.1	-1.83	3.40E-05	0	TC1100001279.mm.1	-2.35	0.001028	0.07075
TC0400000684.mm.1	-1.83	0.000212	0.02035	TC0900000702.mm.1	-2.36	0.000146	0.02035
TC1100000649.mm.1	-1.83	0.004051	0.102094	TC1800001587.mm.1	-2.38	0.000153	0.02035
TC0400002774.mm.1	-1.85	0.000343	0.022831	TC0300001634.mm.1	-2.54	0.000109	0.02035
TC1800000729.mm.1	-1.85	0.000457	0.061584	TC1400001972.mm.1	-2.75	0.000142	0.02035
TC0400000683.mm.1	-1.88	0.000191	0.02035	TC1100002049.mm.1	-2.83	0.000673	0.07075
TC0800002370.mm.1	-1.89	0.008211	0.140132	TC1300000199.mm.1	-4.64	0.000467	0.061584
TC0200003194.mm.1	-1.89	0.00034	0.022831	TC1100001277.mm.1	-2.11	0.000481	0.061584
TC0400000681.mm.1	-1.89	0.000179	0.02035	TC1000001141.mm.1	-2.12	0.000207	0.02035
TC0700003794.mm.1	-1.91	0.003001	0.086741	TC0X00002316.mm.1	-2.14	0.000235	0.022831
TC1900001245.mm.1	-1.93	0.00038	0.061382	TC0400000686.mm.1	-2.16	2.90E-05	0
TC0400000680.mm.1	-1.93	0.000205	0.02035	TC1200002394.mm.1	-2.16	8.80E-05	0.02035
TC0600001824.mm.1	-1.95	0.000298	0.022831	TC0800002027.mm.1	-2.21	2.00E-04	0.02035
TC1100001278.mm.1	-1.96	0.001178	0.07075	TC1800000050.mm.1	-2.22	0.000413	0.061382
TC1600001630.mm.1	-1.96	0.000174	0.02035	TC0200003548.mm.1	-2.22	0.000135	0.02035
TC0500000460.mm.1	-1.96	4.80E-05	0	TC0400002775.mm.1	-2.28	3.90E-05	0
TC1500002220.mm.1	-1.99	0.000268	0.022831	TC0200004450.mm.1	-2.33	0.000202	0.02035
TC0400000666.mm.1	-2.02	9.40E-05	0.02035	TC1100000642.mm.1	-2.33	8.10E-05	0.02035
TC0400000682.mm.1	-2.02	9.40E-05	0.02035	TC1100001279.mm.1	-2.35	0.001028	0.07075
TC1100001277.mm.1	-2.11	0.000481	0.061584	TC0900000702.mm.1	-2.36	0.000146	0.02035
TC1000001141.mm.1	-2.12	0.000207	0.02035	TC1800001587.mm.1	-2.38	0.000153	0.02035
TC0X00002316.mm.1	-2.14	0.000235	0.022831	TC0300001634.mm.1	-2.54	0.000109	0.02035
TC0400000686.mm.1	-2.16	2.90E-05	0	TC1400001972.mm.1	-2.75	0.000142	0.02035
TC1200002394.mm.1	-2.16	8.80E-05	0.02035	TC1100002049.mm.1	-2.83	0.000673	0.07075
TC0800002027.mm.1	-2.21	2.00E-04	0.02035	TC1300000199.mm.1	-4.64	0.000467	0.061584

Supplementary Table 6: Top 10 pathways of enriched genes in the placenta identified through a KEGG pathway analysis.

Pathway Name	p-value	FDR	Gene Symbols
ECM-receptor interaction	7.68E-05	0.001192	Tnc↑ Col1a1↑ Col1a2↑
Protein digestion and absorption	7.95E-05	0.001192	Col1a1↑ Col1a2↑ Cpa3↑
Focal adhesion	0.000964727	0.009647	Col1a2↑ Tnc↑ Col1a1↑
PI3K-Akt signalling pathway	0.004704494	0.035284	Col1a1↑ Col1a2↑ Tnc↑
Amoebiasis	0.007238231	0.040423	Col1a2↑ Col1a1↑
Vascular smooth muscle contraction	0.008084534	0.040423	Actg2↑ Myh11↑
Proteoglycans in cancer	0.025360204	0.108687	Col1a1↑ Col1a2↑
Renin-angiotensin system	0.030881736	0.115807	Cpa3↑
Phenylalanine metabolism	0.035255218	0.117517	Aldh1a3↓
Histidine metabolism	0.042523278	0.123881	Aldh1a3↓

Supplementary Table 7: Top 10 pathways of enriched genes in fat tissue identified through a KEGG pathway analysis.

Pathway Name	p-value	FDR	Gene Symbols
Metabolic pathways	4.25E-11	2.42E-09	Acacb↓ Fdps↓ Tkt↓ Gbe1 Acaca↓ Acss2↓ Pnpla3↓ Fasn↓ Acly↓ Idi1↓ Me1↓ Pdhb↑ Cyp51↑ Aldh1a7↓
Pyruvate metabolism	1.51E-09	4.29E-08	Pdhb↑ Acaca↓ Acss2↓ Acacb↓ Me1↓
Fatty acid biosynthesis	3.98E-08	7.56E-07	Fasn↓ Acaca↓ Acacb↓
Propanoate metabolism	8.78E-06	0.000125	Acss2↓ Acaca↓ Acacb↓
Insulin signalling pathway	2.73E-05	0.000312	Fasn↓ Acacb↓ Acaca↓ Gys2↓
Terpenoid backbone biosynthesis	0.000463	0.004398	Idi1↓ Fdps↓
Citrate cycle (TCA cycle)	0.000987	0.008041	Pdhb↑ Acly↓
Carbohydrate digestion and absorption	0.001954	0.013924	Atp1a3↑ Slc2a5↓
Malaria	0.002315	0.014664	Thbs2↓ Thbs1↓
Starch and sucrose metabolism	0.002808	0.016007	Gbe1↓ Gys2↓

Supplementary Table 8: Co-dysregulated genes in placenta and gonadal fat tissue

Gene Symbol	Accession Number	Feature change in fat tissue	Feature change in the placenta
Strip2	NM_177204	Down (-1.84)	Down(-1.30)
Prl7b1	NM_029355	Down(-1.20)	Down(-2.68)
Fbn2	NM_010181	Up (1.38)	Up(1.86)
Rassf6	NM_028478	Down (-1.68)	Down(-1.23)
Akr1c18	NM_134066	Up (1.53)	Up (2.84)
Dpt	NM_019759	Up (1.26)	Up (2.25)
Cdh6	NM_007666	Up (1.54)	Down (-1.22)
Ccl7	NM_013654	Up (1.47)	Up (1.34)
Gfpt2	NM_013529	Up (1.33)	Up (2.03)
Loxl1	NM_010729	Up (1.29)	Up (1.42)
Cma1	NM_010780	Up (1.53)	Up (1.24)
Prelp	NM_054077	Up (1.91)	Up (1.20)
Cpa3	NM_007753	Up (1.54)	Up (1.82)
Serpina3k	NM_011458	Down (-1.47)	Up (1.45)
Sfrp4	NM_016687	Up (1.54)	Up (1.63)
Tfrc	NM_011638	Down (-1.84)	Down (-1.80)
Dock11	NM_001009947	Up (1.41)	Down (-1.24)
C1qtnf3	NM_030888	Up (1.68)	Up (1.39)
Bgn	NM_007542	Up (1.32)	Up (1.29)
Tgfb1	NM_009369	Up (1.33)	Up (1.83)
F3	NM_010171	Up (1.47)	Up (1.27)
Pamr1	NM_173749	Up (1.60)	Up (1.29)
Tagln	NM_011526	Up (1.60)	Up (1.73)
Muc16	ENSMUST00000034653	Up (1.50)	Up (1.84)
Nov	NM_010930	Up (1.42)	Up (1.54)
Postn	NM_001198765	Up (1.23)	Up (1.65)
Mgp	NM_008597	Up (1.54)	Up (1.71)
Serpine1	NM_008871	Up (2.29)	Up (1.20)
Ccbp2	NM_021609	Up (1.31)	Down (-1.26)
Sulf1	NM_001198565	Up (1.60)	Up (1.35)