

## Supplementary Data

### **RNA sequencing of db/db mice liver identifies lncRNA H19 as a key regulator of gluconeogenesis and hepatic glucose output**

Neha Goyal<sup>1,4</sup>, Ambily Sivadas<sup>1,3,4</sup>, Shamsudheen KV<sup>1,2,4</sup>, Rijith Jayarajan<sup>1,2</sup>, Ankit Verma<sup>1,2</sup>,  
Sridhar Sivasubbu<sup>1,2,4</sup>, Vinod Scaria<sup>1,3,4</sup> & Malabika Datta<sup>1,4</sup>

<sup>1</sup>CSIR-Institute of Genomics and Integrative Biology, Mall Road, Delhi 110007, India;

<sup>2</sup>Genomics and Molecular Medicine, CSIR-Institute of Genomics and Integrative Biology, Mathura Road, Delhi 110025, India;

<sup>3</sup>GN Ramachandran Knowledge Centre for Genome Informatics, CSIR-Institute of Genomics and Integrative Biology, Mathura Road, Delhi 110025, India;

<sup>4</sup>Academy of Scientific and Innovative Research, Training and Development Complex, CSIR Campus, CSIR Road, Taramani, Chennai, India.

Address Correspondence:

Dr. Malabika Datta  
CSIR-Institute of Genomics and Integrative Biology  
Mall Road, Delhi-110 007, India  
Ph.: +91 11 27667439, 27667602 Ext 135  
Fax: +91 11 27667471  
e-mail: [mdatta@igib.res.in](mailto:mdatta@igib.res.in)

**Supplementary Table S1 - RNA-Seq data summary and reference mapping.**

	<b>db/+</b>		<b>db/db</b>	
	<b>C1</b>	<b>C2</b>	<b>D1</b>	<b>D2</b>
<b>Raw reads ( x2 )</b>	35.5M	34M	31.4M	42.8M
<b>Post-QC ( x2 )</b>	28.9M	26.8M	24.6M	33.8M
<b>Aligned reads ( x2 )</b>	19.8M (65.5%)	17.4M (62%)	17.3M (68%)	24M (69%)
<b>Expressed Genes [GENCODE (M3) Catalog - FPKM <math>\geq</math> 1]</b>	10357	10443	10215	10292

**Supplementary Table S2 - FPKM values of 218 differentially expressed genes**

gene_id	gene	locus	value_1	value_2	log2(fold_change)	p_value	q_value	significant
ENSMUSG00000007122.6	Casq1	chr1:172209893-172219868	3.26148	0	-100	5.00E-05	0.0047	yes
ENSMUSG00000007022.8	Xirp2	chr2:67446001-67526614	1.30011	0	-100	5.00E-05	0.0047	yes
ENSMUSG00000003044.7	Dhrs7c	chr11:67798186-67816005	1.52324	0	-100	5.00E-05	0.0047	yes
ENSMUSG000000053093.10	Myh7	chr14:54968677-54994634	5.65554	0	-100	5.00E-05	0.0047	yes
ENSMUSG000000093861.1	Igkv1-110	chr6:68270526-68271267	1.72126	0	-100	0.00015	0.01175	yes
ENSMUSG000000094164.1	Ighv2-3	chr12:113611183-113611617	1.06254	0	-100	0.0007	0.0406	yes
ENSMUSG000000095335.1	Igkv3-5	chr6:70663297-70663895	1.26858	0	-100	0.0002	0.01507	yes
ENSMUSG000000095351.1	Igkv3-2	chr6:70698467-70699067	1.56291	0	-100	5.00E-05	0.0047	yes
ENSMUSG000000096422.1	Igkv12-44	chr6:69814630-69815100	1.31846	0	-100	0.00025	0.01837	yes
ENSMUSG000000051747.9	Ttn	chr2:76703979-76982547	13.2952	0.02988	-8.7973	5.00E-05	0.0047	yes
ENSMUSG000000021798.8	Ldb3	chr14:34526698-34588681	3.96291	0.01906	-7.6999	0.00045	0.02942	yes
ENSMUS	Mup7	chr4:600	24.0521	0.63716	-5.2384	0.0001	0.00851	yes

G0000007 3842.5		66468- 6007047 5						
ENSMUS G0000002 0475.3	Pgam2	chr11:58 01639- 5803733	10.0409	0.38471	-4.706	5.00E-05	0.0047	yes
ENSMUS G0000003 2648.9	Pygm	chr19:63 84398- 6398459	9.624	0.42103	-4.5147	5.00E-05	0.0047	yes
ENSMUS G0000006 0600.10	Eno3	chr11:70 657201- 7066251 3	11.7899	0.51858	-4.5069	5.00E-05	0.0047	yes
ENSMUS G0000003 0246.6	Ldhb	chr6:142 490248- 1425079 57	5.8243	0.28253	-4.3656	0.0006	0.03678	yes
ENSMUS G0000006 8699.7	Flnc	chr6:294 33152- 2946188 8	2.21244	0.11179	-4.3068	5.00E-05	0.0047	yes
ENSMUS G0000002 8464.11	Tpm2	chr4:435 14710- 4352376 5	31.7284	1.68771	-4.2326	5.00E-05	0.0047	yes
ENSMUS G0000000 0031.10	H19	chr7:142 575528- 1425781 43	7.56898	0.41502	-4.1889	5.00E-05	0.0047	yes
ENSMUS G0000007 6612.2	Ighg2c	chr12:11 3285324- 1132889 30	10.2257	0.62101	-4.0414	5.00E-05	0.0047	yes
ENSMUS G0000002 6208.9	Des	chr1:753 60328- 7537501 2	13.1205	0.95265	-3.7837	5.00E-05	0.0047	yes
ENSMUS G0000005 7722.12	Lepr	chr4:101 717403- 1018153 52	6.39182	0.51362	-3.6375	5.00E-05	0.0047	yes
ENSMUS G0000006 4179.8	Tnnt1	chr7:450 4569- 4516382	7.42753	0.66772	-3.4756	5.00E-05	0.0047	yes
ENSMUS G0000000 6221.7	Hspb7	chr4:141 420778- 1414253 11	1.61609	0.14597	-3.4688	0.00045	0.02942	yes
ENSMUS G0000007	Hsp25- ps1	chr13:45 078497-	8.58126	0.7788	-3.4619	0.00055	0.03425	yes

8915.1		4508122 2						
ENSMUS G0000003 1791.7	Tmem38 a	chr8:725 72102- 7258728 2	3.32143	0.30398	-3.4498	0.00015	0.01175	yes
ENSMUS G0000002 9752.7	Asns	chr6:767 5168- 7693254	4.1332	0.38163	-3.437	5.00E-05	0.0047	yes
ENSMUS G0000002 6950.11	Neb	chr2:521 36646- 5233879 8	13.3842	1.3092	-3.3538	5.00E-05	0.0047	yes
ENSMUS G0000003 1633.4	Slc25a4	chr8:462 06796- 4621128 4	19.4112	1.96401	-3.305	5.00E-05	0.0047	yes
ENSMUS G0000007 6614.2	Ighg1	chr12:11 3328975- 1133305 23	6.4415	0.66061	-3.2855	0.00015	0.01175	yes
ENSMUS G0000007 6613.2	Ighg2b	chr12:11 3306388- 1133079 33	12.2121	1.28796	-3.2452	5.00E-05	0.0047	yes
ENSMUS G0000005 3303.9	Slc22a26	chr19:77 81040- 7802667	28.2167	3.15445	-3.1611	5.00E-05	0.0047	yes
ENSMUS G0000000 4951.10	Hspb1	chr5:135 887918- 1358895 63	4.56751	0.54447	-3.0685	0.00035	0.02465	yes
ENSMUS G0000002 7796.2	Smad9	chr3:547 55581- 5480125 7	1.58131	0.18851	-3.0684	5.00E-05	0.0047	yes
ENSMUS G0000002 7499.7	Pkia	chr3:736 6603- 7445366	1.18254	0.15031	-2.9759	0.0006	0.03678	yes
ENSMUS G0000007 6609.1	Igkc	chr6:707 26434- 7072675 7	51.5235	6.90192	-2.9002	5.00E-05	0.0047	yes
ENSMUS G0000003 2060.9	Cryab	chr9:507 52757- 5075663 3	7.74312	1.0729	-2.8514	5.00E-05	0.0047	yes
ENSMUS G0000001 8566.9	Slc2a4	chr11:69 942538- 6994818	1.94366	0.27801	-2.8056	0.00065	0.03884	yes

		8						
ENSMUS G0000006 7149.4	Igj	chr5:885 20511- 8852789 1	3.49652	0.50702	-2.7858	0.0001	0.00851	yes
ENSMUS G0000002 7533.10	Fabp5	chr3:100 12547- 1001660 7	7.38389	1.07853	-2.7753	5.00E-05	0.0047	yes
ENSMUS G0000002 3092.11	Fhl1	chrX:567 31786- 5679334 6	9.2289	1.38352	-2.7378	5.00E-05	0.0047	yes
ENSMUS G0000009 5079.1	Igha	chr12:11 3258767- 1132602 36	10.8879	1.66857	-2.706	5.00E-05	0.0047	yes
ENSMUS G0000007 4254.3	Cyp2a4	chr7:263 07189- 2631508 8	80.2433	12.555	-2.6761	5.00E-05	0.0047	yes
ENSMUS G0000007 4280.5	Gm6166	chr9:574 83912- 5748458 5	9.31749	1.48589	-2.6486	0.00015	0.01175	yes
ENSMUS G0000007 3834.5	Mup11	chr4:606 58465- 6066241 1	80.4653	13.0867	-2.6203	5.00E-05	0.0047	yes
ENSMUS G0000002 9417.8	Cxcl9	chr5:923 21330- 9232807 9	6.1194	1.07663	-2.5069	5.00E-05	0.0047	yes
ENSMUS G0000000 0628.5	Hk2	chr6:827 25024- 8277445 4	2.13531	0.45014	-2.246	5.00E-05	0.0047	yes
ENSMUS G0000003 2366.10	Tpm1	chr9:670 22589- 6704940 6	39.7432	9.0572	-2.1336	5.00E-05	0.0047	yes
ENSMUS G0000009 0877.3	Hspa1b	chr17:34 956435- 3495923 8	5.8126	1.3632	-2.0922	5.00E-05	0.0047	yes
ENSMUS G0000005 0440.7	Hamp	chr7:309 42370- 3094401 7	356.133	92.4839	-1.9451	5.00E-05	0.0047	yes
ENSMUS	Cyp2c40	chr19:39	27.3123	7.36805	-1.8902	0.00055	0.03425	yes

G0000002 5004.10		767070- 3981281 4						
ENSMUS G0000002 4962.8	Vegfb	chr19:69 82472- 6987651	6.20312	1.7005	-1.867	0.0001	0.00851	yes
ENSMUS G0000004 0026.7	Saa3	chr7:467 11997- 4671567 6	21.0316	5.83095	-1.8508	5.00E-05	0.0047	yes
ENSMUS G0000001 5568.10	Lpl	chr8:688 80490- 6890744 8	9.96153	2.81926	-1.8211	5.00E-05	0.0047	yes
ENSMUS G0000007 2849.5	Serpina1 e	chr12:10 3946930- 1039589 75	463.248	133.432	-1.7957	0.00065	0.03884	yes
ENSMUS G0000003 6854.9	Hspb6	chr7:305 39133- 3055983 8	7.99937	2.37815	-1.7501	0.0009	0.04797	yes
ENSMUS G0000009 2274.2	Neat1	chr19:58 24707- 5845478	8.72721	2.7236	-1.68	5.00E-05	0.0047	yes
ENSMUS G0000004 2834.9	Nrep	chr18:33 437018- 3346402 9	4.85936	1.53699	-1.6607	0.0002	0.01507	yes
ENSMUS G0000003 9519.6	Cyp7b1	chr3:180 71949- 1824333 8	17.023	5.43518	-1.6471	0.0002	0.01507	yes
ENSMUS G0000009 2008.1	Cyp2c69	chr19:39 842659- 3988676 9	4.83307	1.54436	-1.6459	0.0003	0.02164	yes
ENSMUS G0000003 9323.13	Igfbp2	chr1:728 24502- 7285247 4	189.748	60.638	-1.6458	5.00E-05	0.0047	yes
ENSMUS G0000005 6978.6	Hamp2	chr7:309 22371- 3092418 1	79.7169	25.6126	-1.638	5.00E-05	0.0047	yes
ENSMUS G0000002 2218.10	Tgml	chr14:55 700008- 5571349 2	5.63318	1.91252	-1.5585	5.00E-05	0.0047	yes
ENSMUS	Ar	chrX:981	1.45873	0.51708	-1.4962	0.0001	0.00851	yes

G0000004 6532.7		49720- 9832321 5						
ENSMUS G0000003 6594.9	H2-Aa	chr17:34 282743- 3428782 7	12.0925	4.45341	-1.4411	0.0003	0.02164	yes
ENSMUS G0000003 2898.6	Fbxo21	chr5:117 976769- 1180101 91	15.1085	5.59704	-1.4326	5.00E-05	0.0047	yes
ENSMUS G0000002 2181.10	C6	chr15:47 27174- 4815456	20.4765	7.6384	-1.4226	0.00085	0.04571	yes
ENSMUS G0000002 5197.8	Cyp2c44	chr19:44 005021- 4402924 7	84.4544	31.7178	-1.4129	5.00E-05	0.0047	yes
ENSMUS G0000001 9838.10	Slc16a10	chr10:40 033534- 4014225 4	20.981	8.06433	-1.3795	5.00E-05	0.0047	yes
ENSMUS G0000003 7266.13	Rsrp1	chr4:134 923591- 1349276 71	24.5877	9.49961	-1.372	5.00E-05	0.0047	yes
ENSMUS G0000003 3065.8	Pfkm	chr15:98 038743- 9813244 7	10.5786	4.18554	-1.3377	0.00045	0.02942	yes
ENSMUS G0000006 0807.7	Serpina6	chr12:10 3646629- 1036572 12	151.363	60.4092	-1.3252	5.00E-05	0.0047	yes
ENSMUS G0000002 4610.9	Cd74	chr18:60 803847- 6081264 6	59.5103	24.2748	-1.2937	5.00E-05	0.0047	yes
ENSMUS G0000010 0094.1	RP23- 181K4.2	chr7:658 03110- 6580644 9	48.0523	20.1054	-1.257	0.0001	0.00851	yes
ENSMUS G0000000 8035.7	Midlip1	chrX:107 07175- 1071969 0	43.698	18.4455	-1.2443	0.0008	0.04444	yes
ENSMUS G0000007 3421.5	H2-Ab1	chr17:34 263208- 3426941 8	10.1955	4.31018	-1.2421	0.0007	0.0406	yes



ENSMUS G0000003 1441.10	Atp11a	chr8:127 57013- 1302090 5	7.27474	3.09555	-1.2327	0.00095	0.04952	yes
ENSMUS G0000003 9218.11	Srrm2	chr17:23 790531- 2382910 9	15.7919	6.85716	-1.2035	0.00085	0.04571	yes
ENSMUS G0000004 1698.6	Slco1a1	chr6:141 907281- 1419469 62	25.6429	11.4024	-1.1692	0.0002	0.01507	yes
ENSMUS G0000000 0303.7	Cdh1	chr8:106 603350- 1066702 46	4.81223	2.16504	-1.1523	0.00035	0.02465	yes
ENSMUS G0000003 8872.9	Zfx3	chr8:108 703099- 1089616 30	1.65049	0.75542	-1.1275	0.00075	0.04266	yes
ENSMUS G0000001 1148.8	Adss1	chr12:11 2620044- 1126413 54	10.1818	4.70572	-1.1135	0.00065	0.03884	yes
ENSMUS G0000005 2837.5	Junb	chr8:849 76908- 8497874 8	10.9806	5.19914	-1.0786	0.00075	0.04266	yes
ENSMUS G0000002 5132.8	Arhgdia	chr11:12 0578103- 1205816 24	21.5495	11.16	-0.9493	0.00085	0.04571	yes
ENSMUS G0000002 0307.9	Cdc34	chr10:79 682194- 7968839 4	18.6089	36.0997	0.95599	0.00085	0.04571	yes
ENSMUS G0000000 9646.8	Pla2g12b	chr10:59 403659- 5942197 6	16.5746	32.3678	0.96559	0.00095	0.04952	yes
ENSMUS G0000003 8150.7	Ormdl3	chr11:98 581255- 9858736 8	13.9366	27.6454	0.98816	0.0007	0.0406	yes
ENSMUS G0000003 8403.9	Hfe2	chr3:965 25184- 9652921 6	10.4075	20.7492	0.99543	0.00065	0.03884	yes
ENSMUS G0000002	Rtfdc1	chr2:172 393793-	9.31587	19.0373	1.03107	0.00095	0.04952	yes

7502.6		1724699 08						
ENSMUS G0000003 6752.4	Tubb4b	chr2:252 18744- 2522470 2	17.0668	35.1857	1.0438	0.00015	0.01175	yes
ENSMUS G0000004 0562.7	Gstm2	chr3:107 981701- 1079864 53	10.7256	22.1266	1.04473	0.00055	0.03425	yes
ENSMUS G0000005 0777.7	Tmem37	chr1:120 067376- 1200740 74	18.9585	40.5323	1.09623	0.00015	0.01175	yes
ENSMUS G0000002 2742.5	Cpox	chr16:58 670207- 5868039 1	23.0178	49.4976	1.10461	0.0007	0.0406	yes
ENSMUS G0000002 7222.9	Pex16	chr2:923 65045- 9238121 7	21.6163	46.8077	1.11462	0.00055	0.03425	yes
ENSMUS G0000002 8383.12	Hsd12	chr4:595 81562- 5961868 9	12.2322	26.4919	1.11487	0.00055	0.03425	yes
ENSMUS G0000001 8585.9	Atox1	chr11:55 446640- 5546123 9	41.3268	89.5367	1.1154	0.00015	0.01175	yes
ENSMUS G0000000 2289.10	Angptl4	chr17:33 773749- 3378157 5	24.9229	54.4419	1.12725	0.00045	0.02942	yes
ENSMUS G0000003 2350.8	Gclc	chr9:777 54534- 7779448 5	24.483	55.1182	1.17075	0.0004	0.02704	yes
ENSMUS G0000003 9886.3	Tmem12 0a	chr5:135 735484- 1357442 71	17.4149	39.5456	1.1832	0.0001	0.00851	yes
ENSMUS G0000001 5337.5	Endog	chr2:301 71492- 3017845 9	15.5334	35.3518	1.18641	0.0009	0.04797	yes
ENSMUS G0000002 0142.7	Slc1a4	chr11:20 302179- 2033271 3	1.16807	2.68144	1.19888	0.00095	0.04952	yes

ENSMUS G0000002 5260.5	Hsd17b1 0	chrX:152 001844- 1520044 42	57.7084	133.363	1.20851	0.0001	0.00851	yes
ENSMUS G0000002 4827.9	Gldc	chr19:30 098448- 3017541 8	23.1202	53.8621	1.22012	0.0004	0.02704	yes
ENSMUS G0000004 4469.7	Tnfaip8l 1	chr17:56 162476- 5617395 5	2.49143	5.85408	1.23247	0.00015	0.01175	yes
ENSMUS G0000002 5059.11	Gyk	chrX:857 01936- 8577681 9	9.50386	22.3524	1.23384	0.0001	0.00851	yes
ENSMUS G0000004 7492.4	Inhbe	chr10:12 7349401- 1273517 72	8.09466	19.0552	1.23514	5.00E-05	0.0047	yes
ENSMUS G0000002 4747.3	Aldh1a7	chr19:20 692952- 2072756 2	42.6169	100.641	1.23971	0.00015	0.01175	yes
ENSMUS G0000001 5357.5	Clpx	chr9:652 94259- 6533065 8	10.5995	25.0619	1.2415	0.0001	0.00851	yes
ENSMUS G0000003 8181.11	Chpf2	chr5:245 86740- 2460201 2	3.34433	7.91633	1.24311	0.00015	0.01175	yes
ENSMUS G0000002 2790.8	Igsf11	chr16:38 901470- 3902715 9	5.00998	11.8612	1.24338	0.00055	0.03425	yes
ENSMUS G0000003 6181.2	Hist1h1c	chr13:23 738807- 2374036 7	19.7177	46.6827	1.24339	5.00E-05	0.0047	yes
ENSMUS G0000003 9956.3	Mrap	chr16:90 738323- 9074978 5	12.4748	29.6024	1.2467	0.00015	0.01175	yes
ENSMUS G0000002 6614.6	Slc30a10	chr1:185 447115- 1854687 62	1.64241	3.90073	1.24793	5.00E-05	0.0047	yes
ENSMUS G0000000	Epha2	chr4:141 301239-	1.94415	4.65885	1.26084	0.0005	0.03233	yes

6445.3		1413293 84						
ENSMUS G0000002 1336.11	Slc17a4	chr13:23 897737- 2391500 7	5.62269	13.4836	1.26188	5.00E-05	0.0047	yes
ENSMUS G0000002 9162.10	Khk	chr5:309 21555- 3093124 6	123.176	296.296	1.26632	0.0007	0.0406	yes
ENSMUS G0000003 2602.5	Slc25a20	chr9:108 662097- 1086846 41	28.7479	69.2966	1.26933	5.00E-05	0.0047	yes
ENSMUS G0000007 8650.2	G6pc	chr11:10 1367560- 1013779 03	65.2522	157.482	1.27109	0.00095	0.04952	yes
ENSMUS G0000004 1845.5	Rhod	chr19:44 25458- 4477447	5.6321	13.7653	1.28929	0.00025	0.01837	yes
ENSMUS G0000003 8539.9	Atf5	chr7:448 12256- 4484080 9	32.7127	80.1186	1.29229	0.0002	0.01507	yes
ENSMUS G0000004 2632.11	Pla2g6	chr15:79 286227- 7932839 0	13.6229	33.5476	1.30017	0.00025	0.01837	yes
ENSMUS G0000004 2476.8	Abcb4	chr5:889 3720- 8959225	28.3657	70.5111	1.3137	5.00E-05	0.0047	yes
ENSMUS G0000003 6781.8	Rps27l	chr9:669 46085- 6694951 6	62.4468	155.978	1.32064	5.00E-05	0.0047	yes
ENSMUS G0000002 1751.8	Acox2	chr14:82 25510- 8259353	50.6442	127.465	1.33163	0.0004	0.02704	yes
ENSMUS G0000003 1762.6	Mt2	chr8:941 72617- 9417356 7	127.023	322.023	1.34207	0.0007	0.0406	yes
ENSMUS G0000004 7446.13	Arl4a	chr12:40 005446- 4003802 5	3.70304	9.51991	1.36224	0.0005	0.03233	yes
ENSMUS G0000003 7583.2	Nr0b2	chr4:133 553375- 1335565	6.94196	17.9273	1.36874	5.00E-05	0.0047	yes

		36						
ENSMUS G0000000 9633.2	G0s2	chr1:193 272160- 1932731 88	43.4076	112.309	1.37146	5.00E-05	0.0047	yes
ENSMUS G0000006 7279.2	Ppp1r3c	chr19:36 731736- 3673665 3	6.34858	16.4941	1.37744	5.00E-05	0.0047	yes
ENSMUS G0000006 3558.4	Aox1	chr1:580 29930- 5810641 3	7.2043	18.8961	1.39116	5.00E-05	0.0047	yes
ENSMUS G0000002 9630.10	Cyp3a25	chr5:145 977193- 1460096 18	84.2196	221.629	1.39592	0.0001	0.00851	yes
ENSMUS G0000005 6313.5	1810011 O10Rik	chr8:244 22403- 2444000 8	5.49141	14.4559	1.39641	5.00E-05	0.0047	yes
ENSMUS G0000006 0002.9	Chpt1	chr10:88 452744- 8850407 3	25.9204	68.2863	1.39751	5.00E-05	0.0047	yes
ENSMUS G0000002 3019.7	Gpd1	chr15:99 715542- 9972500 5	44.5475	118.698	1.41387	5.00E-05	0.0047	yes
ENSMUS G0000002 4778.7	Fas	chr19:34 290658- 3432777 0	3.94372	10.5494	1.41953	0.0008	0.04444	yes
ENSMUS G0000001 0755.11	Cars	chr7:143 557229- 1436000 90	5.02322	13.512	1.42755	5.00E-05	0.0047	yes
ENSMUS G0000003 4220.7	Gpc1	chr1:928 20957- 9286077 9	2.41414	6.58427	1.44751	5.00E-05	0.0047	yes
ENSMUS G0000006 7144.6	Slc22a7	chr17:46 432184- 4643847 7	8.22372	22.5326	1.45415	5.00E-05	0.0047	yes
ENSMUS G0000002 6890.14	Lhx6	chr2:360 81952- 3610540 8	0.61975	1.707	1.4617	0.00085	0.04571	yes
ENSMUS	Dmgdh	chr13:93	70.1197	194.31	1.47047	0.0003	0.02164	yes

G0000004 2102.6		674432- 9375283 1						
ENSMUS G0000002 8766.5	Alpl	chr4:137 741732- 1377963 84	6.31384	17.5613	1.47581	0.0002	0.01507	yes
ENSMUS G0000003 1775.4	Plp	chr8:946 74894- 9469624 2	1.87823	5.26222	1.4863	0.00025	0.01837	yes
ENSMUS G0000003 7440.7	Vnn1	chr10:23 894687- 2390534 3	9.69456	27.2706	1.4921	5.00E-05	0.0047	yes
ENSMUS G0000004 1653.4	Pnpla3	chr15:84 167815- 8418951 2	0.73123	2.06049	1.49458	0.00045	0.02942	yes
ENSMUS G0000007 2664.5	Ugt3a1	chr15:92 73318- 9315032	11.7818	33.2059	1.49488	0.0008	0.04444	yes
ENSMUS G0000005 2565.6	Hist1h1d	chr13:23 555086- 2355583 0	4.99362	14.1914	1.50685	0.0004	0.02704	yes
ENSMUS G0000003 0545.8	Pex11a	chr7:797 35956- 7974313 1	8.64952	24.8737	1.52393	5.00E-05	0.0047	yes
ENSMUS G0000003 6957.7	Lrfn3	chr7:303 55513- 3036277 2	0.8538	2.49728	1.54839	0.00035	0.02465	yes
ENSMUS G0000003 0762.6	Aqp8	chr7:123 462293- 1234680 03	9.52634	27.9933	1.55509	5.00E-05	0.0047	yes
ENSMUS G0000002 0108.3	Ddit4	chr10:59 949674- 5995177 0	3.19017	9.38872	1.5573	5.00E-05	0.0047	yes
ENSMUS G0000002 8655.6	Mfsd2a	chr4:122 946849- 1229611 88	27.9293	82.5885	1.56416	5.00E-05	0.0047	yes
ENSMUS G0000001 6028.9	Celsr1	chr15:85 898757- 8603377 7	0.66031	1.96241	1.5714	5.00E-05	0.0047	yes

ENSMUS G0000003 5372.1	1810055 G02Rik	chr19:37 08332- 3717881	10.512	31.3618	1.57698	5.00E-05	0.0047	yes
ENSMUS G0000002 2010.14	Tsc22d1	chr14:76 414960- 7650776 5	8.89844	26.736	1.58716	5.00E-05	0.0047	yes
ENSMUS G0000001 1305.6	Plin5	chr17:56 111600- 5611759 6	8.89591	26.978	1.60057	5.00E-05	0.0047	yes
ENSMUS G0000006 0519.6	Tor3a	chr1:156 653616- 1566743 56	1.30593	4.06697	1.63887	0.00075	0.04266	yes
ENSMUS G0000003 6216.5	Leap2	chr11:53 422180- 5342317 0	53.0052	165.874	1.64589	5.00E-05	0.0047	yes
ENSMUS G0000004 8856.8	Slc25a47	chr12:10 8851128- 1088568 14	139.028	435.486	1.64725	0.0001	0.00851	yes
ENSMUS G0000002 9269.6	Sult1b1	chr5:875 13338- 8753819 5	5.31234	16.735	1.65545	5.00E-05	0.0047	yes
ENSMUS G0000002 8715.2	Cyp4a14	chr4:115 486199- 1154961 42	120.639	380.482	1.65713	0.0004	0.02704	yes
ENSMUS G0000002 0326.7	Ccng1	chr11:40 748551- 4075531 1	5.52366	17.4392	1.65864	5.00E-05	0.0047	yes
ENSMUS G0000003 0609.13	Aen	chr7:788 95853- 7891120 9	2.17754	7.02138	1.68906	5.00E-05	0.0047	yes
ENSMUS G0000002 3057.5	Fabp2	chr3:122 864736- 1229241 16	8.60366	27.9748	1.7011	5.00E-05	0.0047	yes
ENSMUS G0000007 4264.7	Amy1	chr3:113 555709- 1136301 49	36.0277	118.48	1.71746	5.00E-05	0.0047	yes
ENSMUS G0000002 6853.10	Crat	chr2:303 92253- 3041581	8.69708	28.6125	1.71804	5.00E-05	0.0047	yes

		3						
ENSMUS G0000002 8494.7	Plin2	chr4:866 48385- 8667006 0	76.2897	252.323	1.72571	5.00E-05	0.0047	yes
ENSMUS G0000002 0423.6	Btg2	chr1:134 075169- 1340791 20	1.60436	5.44606	1.76322	5.00E-05	0.0047	yes
ENSMUS G0000004 2429.8	Adora1	chr1:134 193447- 1342354 31	1.57885	5.40014	1.77413	5.00E-05	0.0047	yes
ENSMUS G0000009 1867.1	Cyp2a22	chr7:269 31630- 2693938 6	7.87446	26.9767	1.77646	5.00E-05	0.0047	yes
ENSMUS G0000002 8893.8	Sesn2	chr4:132 492031- 1325105 01	1.06661	3.79133	1.82967	5.00E-05	0.0047	yes
ENSMUS G0000000 3555.7	Cyp17a1	chr19:46 667164- 4667297 4	25.5367	90.8675	1.83119	5.00E-05	0.0047	yes
ENSMUS G0000002 2883.10	Robo1	chr16:72 663148- 7304609 5	0.71879	2.64975	1.88222	5.00E-05	0.0047	yes
ENSMUS G0000002 9763.12	Exoc4	chr6:332 49084- 3397397 9	4.49249	17.1033	1.92869	5.00E-05	0.0047	yes
ENSMUS G0000003 2418.10	Me1	chr9:865 81370- 8670125 3	5.41139	20.7037	1.93582	5.00E-05	0.0047	yes
ENSMUS G0000004 1959.9	S100a10	chr3:935 55079- 9356464 3	27.1462	104.407	1.9434	5.00E-05	0.0047	yes
ENSMUS G0000002 3828.2	Slc22a3	chr17:12 419971- 1250770 4	0.59503	2.33171	1.97035	5.00E-05	0.0047	yes
ENSMUS G0000002 1226.7	Acot2	chr12:83 987860- 8399387 3	1.34747	5.286	1.97193	5.00E-05	0.0047	yes
ENSMUS	Hist1h4n	chr13:21	3.30177	13.6194	2.04435	0.00045	0.02942	yes



G0000006 9305.3		831766- 2183219 6						
ENSMUS G0000006 8083.1	Cyp2d40	chr15:82 759834- 8276418 3	27.3873	113.33	2.04895	5.00E-05	0.0047	yes
ENSMUS G0000005 1579.5	Tceal8	chrX:136 168983- 1361723 42	4.74987	19.7275	2.05425	5.00E-05	0.0047	yes
ENSMUS G0000004 2041.6	2010003 K11Rik	chr19:44 96789- 4498583	4.72342	19.6457	2.05631	5.00E-05	0.0047	yes
ENSMUS G0000002 0604.8	Arsg	chr11:10 9425945- 1095733 30	1.87664	7.88634	2.0712	0.0004	0.02704	yes
ENSMUS G0000004 1567.3	Serpina1 2	chr12:10 4028768- 1040444 43	0.29203	1.2467	2.09392	0.00075	0.04266	yes
ENSMUS G0000002 5003.6	Cyp2c39	chr19:39 510861- 3956852 9	1.16725	5.03282	2.10825	5.00E-05	0.0047	yes
ENSMUS G0000009 6105.1	Bhmt- ps1	chr4:263 68983- 2637020 7	5.1931	22.5453	2.11816	5.00E-05	0.0047	yes
ENSMUS G0000004 5776.2	Lrtm1	chr14:28 904942- 2972186 4	0.70904	3.27268	2.20653	5.00E-05	0.0047	yes
ENSMUS G0000002 3073.1	Slc10a2	chr8:508 5622- 5105232	0.98894	4.58736	2.21371	5.00E-05	0.0047	yes
ENSMUS G0000003 8754.4	Elov13	chr19:46 131896- 4613530 7	1.59146	7.74356	2.28265	5.00E-05	0.0047	yes
ENSMUS G0000000 2944.10	Cd36	chr5:177 81689- 1788895 9	11.6802	57.3461	2.29563	5.00E-05	0.0047	yes
ENSMUS G0000000 3721.9	Insig2	chr1:121 304352- 1213325 89	21.4696	110.427	2.36273	5.00E-05	0.0047	yes
ENSMUS	Tubb2a	chr13:34	4.16672	21.9011	2.39402	5.00E-05	0.0047	yes

G0000005 8672.6		074300- 3407800 8						
ENSMUS G0000007 9494.1	Cml5	chr6:858 08023- 8582097 2	1.81887	9.72126	2.4181	0.0001	0.00851	yes
ENSMUS G0000003 1886.8	Ces2e	chr8:104 926259- 1049346 72	38.1577	204.236	2.42019	5.00E-05	0.0047	yes
ENSMUS G0000006 9324.5	Gm5096	chr18:87 756285- 8775814 3	115.049	615.954	2.42058	5.00E-05	0.0047	yes
ENSMUS G0000000 6218.4	Fam131c	chr4:141 368219- 1413841 75	0.87537	4.74553	2.4386	5.00E-05	0.0047	yes
ENSMUS G0000005 7933.5	Gsta2	chr9:783 31017- 7835578 8	3.02156	16.5823	2.45628	5.00E-05	0.0047	yes
ENSMUS G0000006 1292.6	Cyp3a59	chr5:146 079257- 1461132 85	7.07867	39.6305	2.48506	5.00E-05	0.0047	yes
ENSMUS G0000003 0643.8	Rab30	chr7:927 41602- 9283711 7	1.10174	6.40984	2.5405	0.0004	0.02704	yes
ENSMUS G0000007 4768.5	Bhmt	chr13:93 616890- 9363796 1	123.467	722.312	2.5485	5.00E-05	0.0047	yes
ENSMUS G0000004 9493.8	Pls1	chr9:957 52641- 9584531 1	0.5191	3.14768	2.6002	0.0006	0.03678	yes
ENSMUS G0000006 6072.8	Cyp4a10	chr4:115 518263- 1155336 49	25.9562	162.605	2.64722	5.00E-05	0.0047	yes
ENSMUS G0000003 8776.8	Ephx1	chr1:180 976154- 1810209 04	61.0153	386.579	2.66352	5.00E-05	0.0047	yes
ENSMUS G0000002 1701.7	Plk2	chr13:11 0395043- 1104008	1.38019	8.89865	2.68872	5.00E-05	0.0047	yes

		44						
ENSMUS G0000001 9935.11	Slc17a8	chr10:89 574019- 8962125 3	0.85826	5.93384	2.78948	5.00E-05	0.0047	yes
ENSMUS G0000007 2949.5	Acot1	chr12:84 009501- 8401767 0	3.11668	21.6708	2.79767	5.00E-05	0.0047	yes
ENSMUS G0000000 8153.6	Clstn3	chr6:124 430758- 1244647 94	0.40684	2.85848	2.81272	0.00015	0.01175	yes
ENSMUS G0000003 8768.8	9130409I 23Rik	chr1:181 051236- 1810606 67	0.45883	4.21215	3.19854	5.00E-05	0.0047	yes
ENSMUS G0000003 0004.6	Nat8	chr6:858 30387- 8583208 2	0.65219	6.70661	3.36221	5.00E-05	0.0047	yes
ENSMUS G0000003 2080.6	Apoa4	chr9:462 40695- 4624352 9	37.9121	393.101	3.37417	5.00E-05	0.0047	yes
ENSMUS G0000002 4411.9	Aqp4	chr18:15 389393- 1540368 4	0.30136	3.30165	3.45363	5.00E-05	0.0047	yes
ENSMUS G0000002 9188.9	Slc34a2	chr5:530 38081- 5307166 4	0.12019	1.70108	3.82308	0.00085	0.04571	yes
ENSMUS G0000002 9272.7	Sult1e1	chr5:875 75967- 8759161 1	0.51403	7.89722	3.94141	0.00065	0.03884	yes
ENSMUS G0000003 8508.7	Gdf15	chr8:706 29392- 7063245 6	0.45748	7.28541	3.99322	5.00E-05	0.0047	yes
ENSMUS G0000004 1801.5	Phlda3	chr1:135 766118- 1357691 36	0.55524	9.89557	4.15559	5.00E-05	0.0047	yes
ENSMUS G0000007 5014.1	Gm1080 0	chr2:986 66546- 9866730 1	0.4364	35.7039	6.3543	0.00085	0.04571	yes
ENSMUS	Cdkn1a	chr17:29	0.29636	31.956	6.75261	0.0001	0.00851	yes

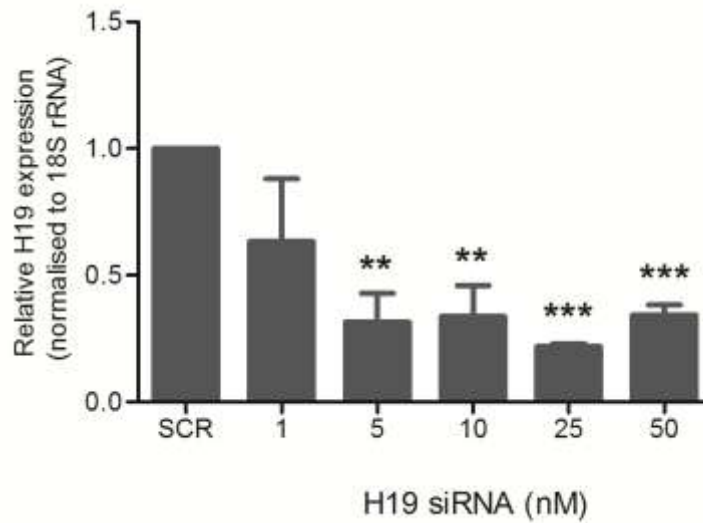
G0000002 3067.8		090978- 2910072 2						
ENSMUS G0000002 4503.2	Spink3	chr18:43 728068- 4373723 7	0	2.83716	100	5.00E-05	0.0047	yes
ENSMUS G0000007 5015.3	Gm1080 1	chr2:986 62236- 9866408 3	0	6.24728	100	5.00E-05	0.0047	yes

**Supplementary Table S3** - Primer sequences used in the qRT-PCR

S No.	Primer	Sequence
<b>Human</b>		
1.	H19	FP: 5'-ACTCAGGAATCGGCTCTGGAA-3' RP: 5'-CTGCTGTTCCGATGGTGTCTT-3'
2.	PCK1	FP: 5'-GGTCCCAGGGTGCATGAAA-3' RP: 5'-CACGTAGGGTGAATCCGTCAG-3'
3.	G6PC	FP: 5'-TCTACGTCCTCTTCCCCATC-3' RP: 5'-TCAGTATCCAAAACCCACCAG-3'
4.	FBP	FP: 5'-TTTCTGTACCCCGCTAACAAAG-3' RP: 5'-TGAATGTCTGTGGGAATGACG-3'
5.	PC	FP: 5'-GACTCTGTGAAACTCGCTAAAC-3' RP: 5'-CTCTGTGACCGTGTGCTC-3'
6.	18S rRNA	FP: 5'-AGAAACGGCTACCACATCCA-3' RP: 5'-CCCTCCAATGGATCCTCGTT-3'
<b>Mouse</b>		
1.	H19	FP: 5'-CCTCAAGATGAAAGAAATGGTGCTA-3' RP: 5'-TCAGAACGAGACGGACTTAAAGAA-3'
2.	Igf2	FP: 5'-GCTTGTTGACACGCTTCAGTTTG-3' RP: 5'-GTTGGCACGGCTTGAAGGC-3'
3.	miR-675	RT primer: 5'-CTCAACTGGTGTCGTGGAGTCGGC AATTCAGTTGAGACTGTGGG-3' FP: 5'-ACACTCCAGCTGGGTGGTGC GGAAAGGGCC-3' RP: 5'-GTGTCGTGGAGTCGGCAATTC-3'
4.	$\beta$ -actin	FP: 5'-AGTGTGACGTTGACATCCGTA-3' RP: 5'-GCCAGAGCAGTAATCTCCTTCT-3'
5.	U6	FP: 5'-GCTTCGGCAGCACATATACTA-3' RP: 5'-AAATATGGAACGCTTCACGA-3'

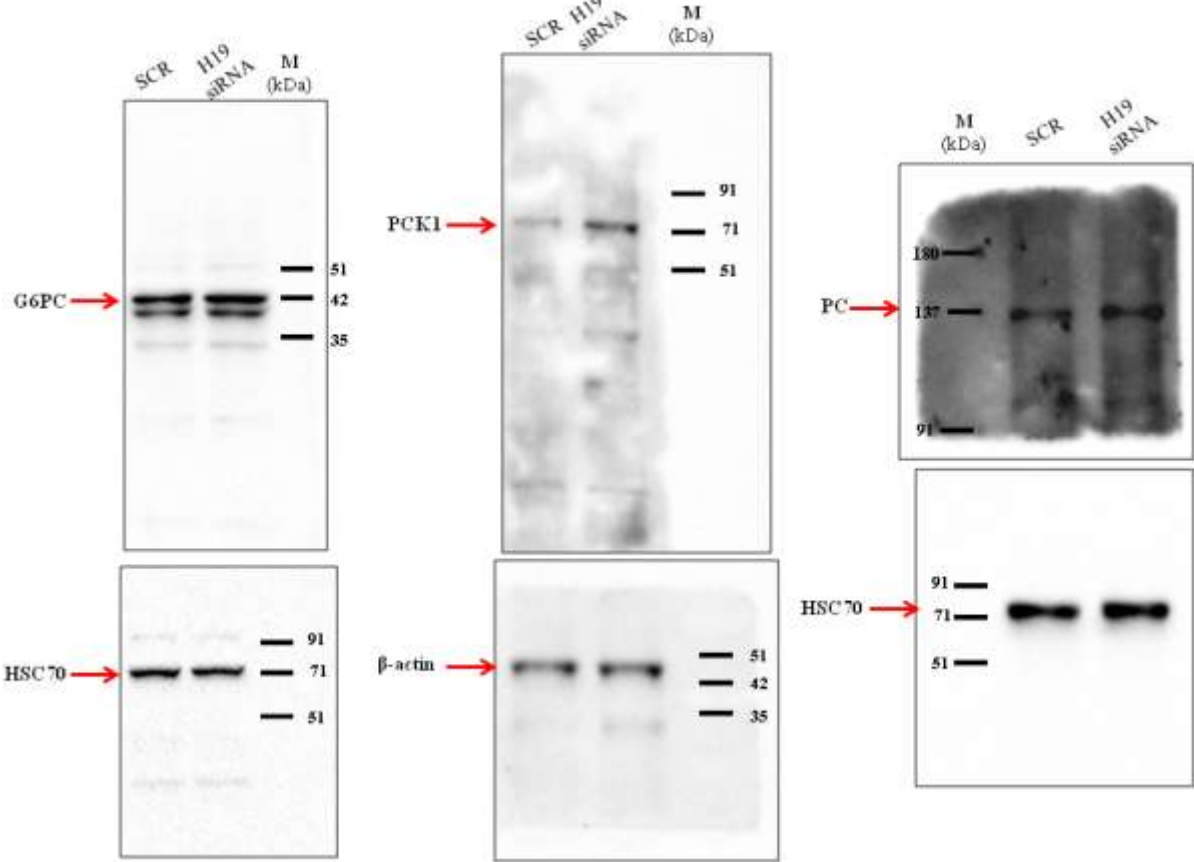
6.	Pck1	FP: 5' -CCATCCCAACTCGAGATTCTG-3' RP: 5' -CTGAGGGCTTCATAGACAAGG-3'
7.	Fbp1	FP: 5' -CTGATATTCACCGCACTCTGG-3' RP: 5' -CGGCCTTCTCCATGACATAAG-3'
8.	Pcx	FP: 5' -GGACTCCTTTGGACACAGAG-3' RP: 5' -AATCTCATTCTCATAACACGTCGG-3'
FP, Forward Primer; RP, Reverse Primer		

### Supplementary Figure S1



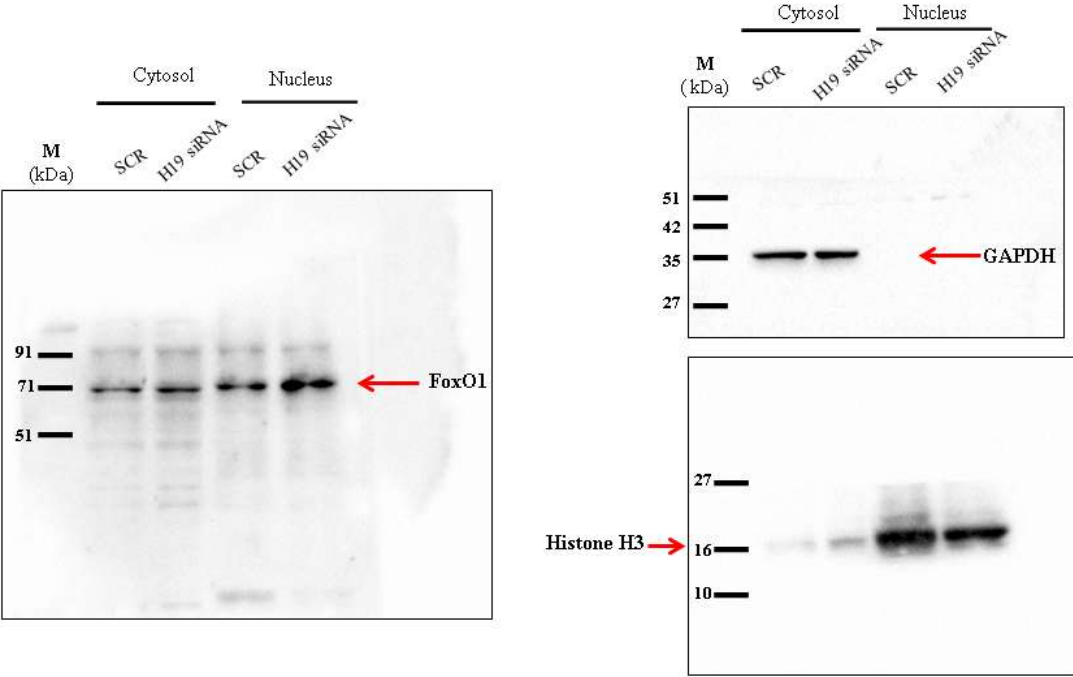
**Supplementary Figure S1** - HepG2 cells were reverse transfected with the H19 siRNA (1-50nM) and control cells were transfected with the scramble (SCR), and after 48h of incubation RNA was isolated and assessed for the transcript levels of H19 by qRT-PCR. 18S rRNA was used as a normalization control. Data is presented as mean  $\pm$  SEM of at least three independent experiments. \*\*P < 0.01, \*\*\*P < 0.001 as compared to scramble transfected cells (SCR).

Supplementary Figure S2 – Full-length blots used to generate Fig. 5c





Supplementary Figure S3 – Full-length blots used to generate Fig. 6a



Supplementary Figure S4 – Full-length blots used to generate Fig. 6c

