

**Supplementary Table 1.**

Complete set of differentially expressed genes comparing the effect of basal to high glucose in the DMSO control HepG2 cells.

Gene Symbol	Ensembl ID	BG DMSO vs HG DMSO	
		Fold <sup>1</sup> Change	qvalue <sup>2</sup>
ADAMTS4	ENSG00000158859	-1.57	0.05
ADAMTSL4-AS1	ENSG00000203804	-1.75	0.02
AL020996.3	ENSG00000272478	-1.95	0.03
AL162431.2	ENSG00000243155	-1.96	0.04
AL445524.1	ENSG00000233461	2.61	0.03
ANGPTL4	ENSG00000167772	-2.05	0.02
ANGPTL8	ENSG00000130173	4.09	0.00
ANKRD1	ENSG00000148677	-1.84	0.04
AOC3	ENSG00000131471	1.54	0.01
AP006285.1	ENSG00000227306	4.54	0.01
AQP3	ENSG00000165272	-2.50	0.01
ARC	ENSG00000198576	-10.27	0.05
ARRDC4	ENSG00000140450	7.16	0.00
BIRC7	ENSG00000101197	-2.09	0.02
BTG2	ENSG00000159388	1.88	0.01
C10orf10	ENSG00000165507	2.47	0.00
C21orf58	ENSG00000160298	-1.76	0.04
C2CD2L	ENSG00000172375	-1.65	0.01
CBX4	ENSG00000141582	-1.53	0.02
CBY1	ENSG00000100211	1.38	0.04
CEP170B	ENSG00000099814	-1.52	0.01
CLDN14	ENSG00000159261	2.45	0.05
CLK1	ENSG0000013441	-1.44	0.02
CTH	ENSG00000116761	-1.97	0.03
DBH-AS1	ENSG00000225756	1.72	0.01
DCBLD1	ENSG00000164465	-1.32	0.03
DDIT3	ENSG00000175197	-4.33	0.00
DDIT4	ENSG00000168209	-2.44	0.01
DEPDC7	ENSG00000121690	1.65	0.02
DNMT3L	ENSG00000142182	30.65	0.03
DUSP1	ENSG00000120129	-2.30	0.00
DUSP12	ENSG00000081721	-1.70	0.01
DUSP5	ENSG00000138166	-1.87	0.01
EEF1A2	ENSG00000101210	2.37	0.04
EGLN1	ENSG00000135766	-1.69	0.01
EGR1	ENSG00000120738	-1.64	0.02
EGR3	ENSG00000179388	-3.92	0.01

EIF1AD	ENSG00000175376	1.44	0.04
EIF4A2	ENSG00000156976	-1.59	0.01
ELF3	ENSG00000163435	-1.93	0.00
EMP2	ENSG00000213853	1.69	0.01
EPC1	ENSG00000120616	-1.38	0.03
EPC2	ENSG00000135999	-1.64	0.02
ERRF1	ENSG00000116285	-2.16	0.00
F2RL1	ENSG00000164251	-1.97	0.00
FAM47E	ENSG00000189157	-1.35	0.04
FAM99B	ENSG00000205865	6.06	0.01
FOXP4	ENSG00000137166	-1.40	0.05
FOXQ1	ENSG00000164379	-1.66	0.01
FXSD2	ENSG00000137731	1.59	0.04
G6PC	ENSG00000131482	6.19	0.00
GDF15	ENSG00000130513	-1.78	0.03
GPATCH1	ENSG00000076650	-1.56	0.04
GRB10	ENSG00000106070	-1.56	0.01
H1FO	ENSG00000189060	-1.54	0.04
HGFAC	ENSG00000109758	1.51	0.03
HIC1	ENSG00000177374	-13.63	0.03
HK2	ENSG00000159399	-1.67	0.04
HPCAL1	ENSG00000115756	-1.64	0.03
IGFBP3	ENSG00000146674	-2.48	0.02
IL11	ENSG00000095752	-3.03	0.00
IL1RN	ENSG00000136689	1.60	0.01
INHBB	ENSG00000163083	-2.13	0.02
ITPRIP	ENSG00000148841	-1.93	0.00
JAG1	ENSG00000101384	-1.96	0.01
JUN	ENSG00000177606	-1.59	0.02
KALRN	ENSG00000160145	-1.58	0.02
KBTBD4	ENSG00000123444	2.29	0.04
KCMF1	ENSG00000176407	-1.85	0.01
KDM3A	ENSG00000115548	-1.77	0.02
KLF10	ENSG00000155090	1.76	0.02
KLF5	ENSG00000102554	-2.37	0.01
KLHL18	ENSG00000114648	1.77	0.01
MAFA	ENSG00000182759	-8.95	0.05
MAGED1	ENSG00000179222	1.48	0.04
MARVELD3	ENSG00000140832	1.61	0.04
MIDN	ENSG00000167470	-1.75	0.00
MOB3A	ENSG00000172081	-1.63	0.01
MXD4	ENSG00000123933	1.78	0.04
NA	NA	4.42	0.01
NA	NA	4.34	0.01
NA	NA	2.56	0.03
NA	NA	2.42	0.03

NA	NA	2.37	0.03
NA	NA	1.76	0.03
NA	NA	1.70	0.04
NA	NA	1.58	0.04
NA	NA	-2.13	0.04
NA	NA	-2.64	0.04
NA	NA	-7.13	0.05
NDRG1	ENSG00000104419	-1.77	0.00
NES	ENSG00000132688	-1.44	0.03
NFIL3	ENSG00000165030	-1.83	0.01
NKAIN4	ENSG00000101198	-14.99	0.03
NKD1	ENSG00000140807	-1.50	0.01
NLGN4Y	ENSG00000165246	-1.52	0.04
NR1D1	ENSG00000126368	-1.70	0.03
OR2I1P	ENSG00000237988	2.34	0.04
PDGFA	ENSG00000197461	-1.85	0.04
PDLIM5	ENSG00000163110	-1.56	0.01
PEX13	ENSG00000162928	-2.20	0.01
PHLDA1	ENSG00000139289	-1.49	0.00
PIGA	ENSG00000165195	-2.06	0.03
PIM1	ENSG00000137193	-1.64	0.01
PKLR	ENSG00000143627	1.97	0.01
PLCXD1	ENSG00000182378	-1.44	0.02
PLIN2	ENSG00000147872	-1.63	0.01
PPL	ENSG00000118898	-1.57	0.05
PPP1R15A	ENSG00000087074	-2.61	0.00
PPP1R9B	ENSG00000108819	1.43	0.03
PTPRH	ENSG00000080031	-1.40	0.04
RHOA	ENSG00000116574	-1.58	0.04
RNF115	ENSG00000265491	-1.48	0.01
RPH3AL	ENSG00000181031	-1.64	0.01
SAFB2	ENSG00000130254	1.33	0.05
SERPINE1	ENSG00000106366	-1.70	0.02
SESN2	ENSG00000130766	-1.93	0.02
SH3RF1	ENSG00000154447	-1.79	0.03
SIAH1	ENSG00000196470	-1.37	0.04
SLC20A1	ENSG00000144136	-1.83	0.01
SLC25A47	ENSG00000140107	2.40	0.01
SLC28A1	ENSG00000156222	2.24	0.03
SLC2A1	ENSG00000117394	-1.63	0.02
SLC2A3	ENSG00000059804	-2.06	0.01
SLC30A1	ENSG00000170385	1.74	0.03
SLC51A	ENSG00000163959	-1.79	0.03
SMAP1	ENSG00000112305	-1.42	0.03
SMLR1	ENSG00000256162	1.71	0.01
SOX8	ENSG00000005513	-2.58	0.03

SPRY4	ENSG00000187678	-1.47	0.02
SQSTM1	ENSG00000161011	-1.55	0.01
STC2	ENSG00000113739	-1.61	0.02
STX10	ENSG00000104915	1.80	0.04
TIMM9	ENSG00000100575	-1.60	0.04
TMC7	ENSG00000170537	-1.85	0.02
TMEM260	ENSG00000070269	-1.76	0.04
TNFRSF10D	ENSG00000173530	1.57	0.02
TNRC6C- AS1	ENSG00000204282	-1.60	0.04
TRIB1	ENSG00000173334	-1.38	0.04
TRIM41	ENSG00000146063	1.71	0.02
TSPAN1	ENSG00000117472	1.94	0.02
TUBE1	ENSG00000074935	-2.21	0.03
TUBGCP3	ENSG00000126216	-1.97	0.02
TXNIP	ENSG00000265972	11.52	0.00
ULBP1	ENSG00000111981	-12.04	0.04
VASP	ENSG00000125753	-1.82	0.00
WEE1	ENSG00000166483	-2.56	0.05
YPEL3	ENSG00000090238	1.89	0.04
ZFP36	ENSG00000128016	-2.19	0.01
ZMAT5	ENSG00000100319	2.05	0.03
ZNF395	ENSG00000186918	-1.56	0.03
ZNF48	ENSG00000180035	-1.61	0.03
ZNF496	ENSG00000162714	-1.79	0.01
ZNF629	ENSG00000102870	-1.50	0.04
ZSCAN26	ENSG00000197062	-2.46	0.03
ZSCAN9	ENSG00000137185	-2.26	0.02
ZYX	ENSG00000159840	-1.62	0.04

<sup>1</sup>Fold change of DMSO treated cells in basal compared to DMSO treated high glucose

<sup>2</sup>adjusted p-values (q-values) were determined through Benjamini-Hochberg