

Additional File 12. Common down-regulated genes in cells exposed to hydrogel for 24 h and 48 h. Fold-change is logarithmic ratio (\log_2 ratio) to expression level in control.

GeneName	Description	Fold-change (\log_2ratio)(24h)	Fold-change (\log_2ratio)(48h)
LOC100128519	Homo sapiens misc_RNA (LOC100128519), miscRNA [XR_038473]	-2.415	-2.824
LOC392335	Homo sapiens misc_RNA (LOC392335), miscRNA [XR_037043]	-2.242	-2.207
LOC653071	Homo sapiens similar to CG32820-PA, isoform A, mRNA (cDNA clone IMAGE:4812880), [BC068588]	-2.200	-2.376
CDC14A	Homo sapiens CDC14 cell division cycle 14 homolog A (S. cerevisiae) (CDC14A), mRNA [NM_003672]	-2.193	-2.654
LOC344178	Homo sapiens similar to hCG1794703 (LOC344178), mRNA [XM_001721796]	-2.104	-2.285
KIAA0802	Homo sapiens KIAA0802 (KIAA0802), mRNA [NM_015210]	-1.937	-1.939
HERC3	Homo sapiens hect domain and RLD 3, mRNA (cDNA clone IMAGE:6050308), [BC038960]	-1.885	-2.902
DAGLA	Homo sapiens diacylglycerol lipase, alpha (DAGLA), mRNA [NM_006133]	-1.843	-2.241
GOLGA8E	Homo sapiens golgi autoantigen, golgin subfamily a, 8E (GOLGA8E), mRNA [NM_001012423]	-1.833	-1.865
LOC389992	Homo sapiens similar to hCG2040259 (LOC389992), mRNA [XM_001720568]	-1.830	-2.482
MAGEA1	Homo sapiens melanoma antigen family A, 1 (directs expression of antigen MZ2-E) (MAGEA1), mRNA [NM_004988]	-1.755	-2.158
PL-5283	Homo sapiens PL-5283 protein (PL-5283), mRNA [NM_001130929]	-1.891	-1.754
SNHG10	Homo sapiens small nucleolar RNA host gene 10 (non-protein coding) (SNHG10), non-coding RNA [NR_003138]	-1.710	-2.012
KIAA0492	Homo sapiens mRNA, chromosome 1 specific transcript KIAA0492. [AB007961]	-1.669	-2.239
LOC728344	Homo sapiens misc_RNA (LOC728344), miscRNA [XR_018424]	-1.613	-2.054
ZNF319	Homo sapiens zinc finger protein 319 (ZNF319), mRNA [NM_020807]	-2.097	-1.603
NUDT12	Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 12 (NUDT12), mRNA [NM_031438]	-1.785	-1.593
EFCAB10	Homo sapiens cDNA clone IMAGE:6616931, partial cds. [BC062748]	-1.581	-2.424
ZNF509	Homo sapiens zinc finger protein 509 (ZNF509), mRNA [NM_145291]	-1.563	-2.192
SPATA9	Homo sapiens cDNA FLJ35906 fis, clone TESTI2009727. [AK093225]	-1.561	-1.900
LOC646446	Homo sapiens similar to hCG2040301 (LOC646446), mRNA [XM_001722653]	-1.530	-2.322

LOC203510	Homo sapiens similar to hCG1644442 (LOC203510), mRNA [XM_001719132]	-1.526	-1.895
ESF1	Homo sapiens ESF1, nucleolar pre-rRNA processing protein, homolog (ESF1), mRNA [NM_016649]	-1.516	-1.785
LOC653773	Homo sapiens misc_RNA (LOC653773), miscRNA [XR_042355]	-1.491	-2.162
LOC392382	Homo sapiens misc_RNA (LOC392382), miscRNA [XR_019110]	-1.487	-2.146
LOC100131149	Homo sapiens misc_RNA (LOC100131149), miscRNA [XR_039101]	-1.475	-1.595
LOC126235	Full-length cDNA clone CS0DE004YN04 of Placenta of Homo sapiens (human). [CR622909]	-1.471	-1.676
LOC391282	Homo sapiens similar to ribosomal protein L23a (LOC391282), mRNA [XM_372878]	-1.468	-1.858
LOC729684	Homo sapiens misc_RNA (LOC729684), miscRNA [XR_039360]	-1.519	-1.447
CCDC68	Homo sapiens coiled-coil domain containing 68 (CCDC68), mRNA [NM_025214]	-1.440	-1.570
ZCRB1	Homo sapiens zinc finger CCHC-type and RNA binding motif 1 (ZCRB1), mRNA [NM_033114]	-1.439	-1.847
ITM2B	Homo sapiens integral membrane protein 2B (ITM2B), mRNA [NM_021999]	-1.422	-1.588
ANO8	Homo sapiens anoctamin 8 (ANO8), mRNA [NM_020959]	-1.420	-1.444
LOC100132439	Homo sapiens similar to Protein FAM27E3 (LOC100132439), mRNA [XM_001719283]	-1.904	-1.411
TRIM66	Homo sapiens tripartite motif-containing 66 (TRIM66), mRNA [NM_014818]	-1.398	-1.585
FTMT	Homo sapiens ferritin mitochondrial (FTMT), mRNA [NM_177478]	-1.396	-1.738
LOC343495	Homo sapiens misc_RNA (LOC343495), miscRNA [XR_016540]	-1.386	-2.374
ZNF737	Homo sapiens zinc finger protein 737, mRNA (cDNA clone IMAGE:4854518), [BC015765]	-1.382	-2.317
SAR1P3	Homo sapiens SAR1 gene homolog (S. cerevisiae) pseudogene 3 (SAR1P3), mRNA [XM_001714154]	-1.371	-2.114
LOC390413	Homo sapiens misc_RNA (LOC390413), miscRNA [XR_018341]	-1.369	-1.942
LOC729332	Homo sapiens hypothetical LOC729332 (LOC729332), mRNA [XM_001129827]	-1.366	-1.813
MGC3207	Homo sapiens translation initiation factor eIF-2B subunit alpha/beta/delta-like protein (MGC3207), mRNA [NM_001031727]	-1.973	-1.363
LOC100132658	Homo sapiens misc_RNA (LOC100132658), miscRNA [XR_038952]	-1.362	-2.428
LOC100131323	Homo sapiens misc_RNA (LOC100131323), miscRNA [XR_039461]	-1.349	-1.774
LOC728774	Homo sapiens similar to hCG1994130 (LOC728774), mRNA [XM_001129390]	-1.349	-1.980

LOC645231	Full-length cDNA clone CS0DI026YJ08 of Placenta Cot 25-normalized of Homo sapiens (human). [CR590757]	-1.338	-1.949
RNF215	Homo sapiens ring finger protein 215 (RNF215), mRNA [NM_001017981]	-1.335	-1.924
FKSG2	Homo sapiens apoptosis inhibitor (FKSG2), mRNA [NM_021631]	-1.333	-2.014
ZNF486	Homo sapiens zinc finger protein 486 (ZNF486), mRNA [NM_052852]	-1.333	-2.132
TRUB1	Homo sapiens TruB pseudouridine (psi) synthase homolog 1 (E. coli) (TRUB1), mRNA [NM_139169]	-1.332	-1.342
LRP5L	Homo sapiens low density lipoprotein receptor-related protein 5-like (LRP5L), mRNA [NM_182492]	-1.350	-1.326
TBX15	Homo sapiens T-box 15 (TBX15), mRNA [NM_152380]	-1.429	-1.326
ARNT2	Homo sapiens aryl-hydrocarbon receptor nuclear translocator 2 (ARNT2), mRNA [NM_014862]	-1.323	-1.892
RPL32P3	Homo sapiens ribosomal protein L32 pseudogene 3 (RPL32P3), non-coding RNA [NR_003111]	-1.321	-1.417
EIF1B	Homo sapiens eukaryotic translation initiation factor 1B (EIF1B), mRNA [NM_005875]	-1.371	-1.317
TMEM129	Homo sapiens transmembrane protein 129 (TMEM129), mRNA [NM_138385]	-1.309	-1.596
ABCD4	Homo sapiens ATP-binding cassette, sub-family D (ALD), member 4 (ABCD4), mRNA [NM_005050]	-1.323	-1.301
ID2	Homo sapiens inhibitor of DNA binding 2, dominant negative helix-loop-helix protein (ID2), mRNA [NM_002166]	-1.297	-3.766
LOC730834	DB090170 TESTI4 Homo sapiens cDNA clone TESTI4038997 5', mRNA sequence [DB090170]	-1.297	-1.517
LOC130728	Homo sapiens misc_RNA (LOC130728), miscRNA [XR_019248]	-1.292	-1.535
LOC646993	Homo sapiens similar to high-mobility group box 3 (LOC646993), mRNA [XM_929965]	-1.291	-1.469
CENPK	Homo sapiens centromere protein K (CENPK), mRNA [NM_022145]	-1.280	-1.351
LOC100130171	Homo sapiens misc_RNA (LOC100130171), miscRNA [XR_038676]	-1.274	-1.322
LOC100128626	Homo sapiens misc_RNA (LOC100128626), miscRNA [XR_038662]	-1.271	-1.899
CBWD6	Homo sapiens clone 1659351 unknown mRNA. [AF293368]	-1.270	-1.800
USP11	Homo sapiens ubiquitin specific peptidase 11 (USP11), mRNA [NM_004651]	-2.228	-1.268
C10orf140	Homo sapiens chromosome 10 open reading frame 140 (C10orf140), mRNA [NM_207371]	-1.267	-1.304
RNF214	Homo sapiens ring finger protein 214 (RNF214),mRNA [NM_001077239]	-1.561	-1.263

PARP4	Homo sapiens poly (ADP-ribose) polymerase family, member 4 (PARP4), mRNA [NM_006437]	-1.253	-1.747
HIST1H3J	Homo sapiens histone cluster 1, H3j (HIST1H3J), mRNA [NM_003535]	-1.252	-1.601
LOC100132086	Homo sapiens misc_RNA (LOC100132086), miscRNA [XR_037769]	-1.251	-2.270
PLEKHA7	Homo sapiens pleckstrin homology domain containing, family A member 7 (PLEKHA7), mRNA [NM_175058]	-1.441	-1.247
RECQL	Homo sapiens RecQ protein-like (DNA helicase Q1-like) (RECQL), mRNA [NM_032941]	-1.246	-1.275
TMEM154	Homo sapiens transmembrane protein 154 (TMEM154), mRNA [NM_152680]	-2.206	-1.228
ZNF442	Homo sapiens zinc finger protein 442 (ZNF442), mRNA [NM_030824]	-1.226	-1.512
POLB	Homo sapiens polymerase (DNA directed), beta (POLB), mRNA [NM_002690]	-1.220	-1.704
IL17RB	Homo sapiens interleukin 17 receptor B (IL17RB), mRNA [NM_018725]	-2.019	-1.219
C18orf55	Homo sapiens chromosome 18 open reading frame 55 (C18orf55), mRNA [NM_014177]	-1.322	-1.215
LOC253482	Homo sapiens misc_RNA (LOC253482), miscRNA [XR_016415]	-1.209	-1.252
LOC643205	Homo sapiens hypothetical LOC643205 (LOC643205), mRNA [XM_001716733]	-1.202	-1.592
RPS6P1	Homo sapiens misc_RNA (RPS6P1), miscRNA [XR_016837]	-1.201	-1.744
NACAP1	Homo sapiens nascent-polypeptide-associated complex alpha polypeptide pseudogene 1 (NACAP1), non-coding RNA [NR_002182]	-1.198	-1.621
KIAA1524	Homo sapiens KIAA1524 (KIAA1524), mRNA [NM_020890]	-1.236	-1.197
SNRPG	Homo sapiens small nuclear ribonucleoprotein polypeptide G (SNRPG), mRNA [NM_003096]	-1.195	-1.455
MNAT1	Homo sapiens menage a trois homolog 1, cyclin H assembly factor (<i>Xenopus laevis</i>) (MNAT1), mRNA [NM_002431]	-1.229	-1.186
LOC728198	Homo sapiens similar to transcription associated factor TAFII31L (LOC728198), mRNA [XM_001126120]	-1.481	-1.175
FLJ27352	Homo sapiens cDNA FLJ27352 fis, clone TST05165. [AK130862]	-1.174	-1.234
LOC100128266	Homo sapiens misc_RNA (LOC100128266), miscRNA [XR_037888]	-1.168	-1.938
FAM84B	Homo sapiens family with sequence similarity 84, member B (FAM84B), mRNA [NM_174911]	-1.517	-1.165
FAM86A	Homo sapiens family with sequence similarity 86, member A (FAM86A), mRNA [NM_201400]	-1.158	-1.235
IKZF4	Homo sapiens IKAROS family zinc finger 4 (Eos) (IKZF4),	-2.320	-1.158

	mRNA [NM_022465]		
RPL31P4	Homo sapiens misc_RNA (LOC729646), miscRNA [XR_037308]	-1.158	-1.456
CLIP4	Homo sapiens CAP-GLY domain containing linker protein family, member 4 (CLIP4), mRNA [NM_024692]	-1.457	-1.158
LOC340508	Homo sapiens hypothetical protein LOC340508 (LOC340508), non-coding RNA [NR_002942]	-1.480	-1.157
SSBP1	Homo sapiens single-stranded DNA binding protein 1 (SSBP1), mRNA [NM_003143]	-1.155	-1.434
ZNF43	Homo sapiens zinc finger protein 43 (ZNF43), mRNA [NM_003423]	-1.154	-1.929
PABPC3	Homo sapiens poly(A) binding protein, cytoplasmic 3 (PABPC3), mRNA [NM_030979]	-1.150	-1.828
BAG4	BAG family molecular chaperone regulator 4 (BAG-4)(Bcl-2-associated athanogene 4) [Source:UniProtKB/Swiss-Prot; Acc:O95429] [ENST00000287322]	-1.149	-1.359
LOC100128328	Homo sapiens hypothetical protein LOC100128328 (LOC100128328), mRNA [XM_001715053]	-1.143	-1.482
NSBP1	Homo sapiens nucleosomal binding protein 1 (NSBP1), mRNA [NM_030763]	-1.169	-1.141
LOC285550	Homo sapiens cDNA FLJ42660 fis, clone BRAMY2010808. [AK124651]	-1.138	-1.216
GNG2	Homo sapiens guanine nucleotide binding protein (G protein), gamma 2 (GNG2), mRNA [NM_053064]	-1.135	-1.191
CBR1	Homo sapiens carbonyl reductase 1 (CBR1), mRNA [NM_001757]	-1.131	-1.131
IRAK1BP1	Homo sapiens interleukin-1 receptor-associated kinase 1 binding protein 1 (IRAK1BP1), mRNA [NM_001010844]	-1.128	-1.221
LOC100129720	Full-length cDNA clone CS0DI044YN21 of Placenta Cot 25-normalized of Homo sapiens (human). [CR619772]	-1.127	-1.534
NUDT9	Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 9 (NUDT9), mRNA [NM_024047]	-1.166	-1.125
TUBA8	Homo sapiens tubulin, alpha 8 (TUBA8), mRNA [NM_018943]	-1.127	-1.110
LOC100125556	Homo sapiens family with sequence similarity 86, member A pseudogene (LOC100125556), non-coding RNA [NR_024251]	-1.126	-1.105
ZFP36L2	Homo sapiens zinc finger protein 36, C3H type-like 2 (ZFP36L2), mRNA [NM_006887]	-1.090	-1.289
C10orf10	Homo sapiens chromosome 10 open reading frame 10 (C10orf10), mRNA [NM_007021]	-1.089	-1.269
TMC8	Homo sapiens transmembrane channel-like 8 (TMC8), mRNA [NM_152468]	-1.680	-1.079
LOC100133154	Homo sapiens hypothetical protein LOC100133154 (LOC100133154), mRNA [XM_001714925]	-2.118	-1.073
HEATR5A	Homo sapiens HEAT repeat containing 5A (HEATR5A), mRNA	-1.070	-1.330

	[NM_015473]		
IPPK	Homo sapiens inositol 1,3,4,5,6-pentakisphosphate 2-kinase (IPPK), mRNA [NM_022755]	-1.066	-1.143
ADO	Homo sapiens 2-aminoethanethiol (cysteamine) dioxygenase (ADO), mRNA [NM_032804]	-1.135	-1.065
KLRC3	Homo sapiens killer cell lectin-like receptor subfamily C, member 3 (KLRC3), mRNA [NM_007333]	-1.714	-1.064
ZNF594	Homo sapiens zinc finger protein 594 (ZNF594), mRNA [NM_032530]	-1.720	-1.058
ZNF107	Homo sapiens zinc finger protein 107 (ZNF107), mRNA [NM_016220]	-1.057	-1.084
C5orf36	Homo sapiens chromosome 5 open reading frame 36 (C5orf36), mRNA [NM_173665]	-1.053	-1.883
FAM179A	Homo sapiens family with sequence similarity 179, member A (FAM179A), mRNA [NM_199280]	-1.052	-1.927
LOC400657	Homo sapiens hypothetical LOC400657 (LOC400657), non-coding RNA [NR_024484]	-1.095	-1.047
LOC730107	Homo sapiens similar to Glycine cleavage system H protein, mitochondrial (LOC730107), mRNA [XM_001721064]	-1.047	-1.329
C1orf198	Homo sapiens chromosome 1 open reading frame 198 (C1orf198), mRNA [NM_032800]	-1.677	-1.039
LOC257039	Homo sapiens similar to hCG2040268 (LOC257039), mRNA [XM_172230]	-1.037	-1.338
TBX3	Homo sapiens T-box 3 (TBX3), mRNA [NM_016569]	-1.034	-1.495
LOC100133528	Homo sapiens similar to HIG1 domain family, member 1A (LOC100133528), mRNA [XM_001721514]	-1.106	-1.033
GLRXL	Homo sapiens glutaredoxin (thioltransferase)-like (GLRXL), mRNA [NM_001123388]	-1.241	-1.032
EID2	Homo sapiens EP300 interacting inhibitor of differentiation 2 (EID2), mRNA [NM_153232]	-1.257	-1.029
FAM13C1	Homo sapiens family with sequence similarity 13, member C1 (FAM13C1), mRNA [NM_001001971]	-1.028	-1.155
RAP1B	Homo sapiens RAP1B, member of RAS oncogene family (RAP1B), mRNA [NM_015646]	-1.138	-1.028
TCF7L2	Homo sapiens transcription factor 7-like 2 (T-cell specific, HMG-box) (TCF7L2), mRNA [NM_030756]	-1.028	-2.422
FGFR1OP	Homo sapiens FGFR1 oncogene partner (FGFR1OP), mRNA [NM_007045]	-1.026	-1.244
BPNT1	Homo sapiens 3'(2'), 5'-bisphosphate nucleotidase 1 (BPNT1), mRNA [NM_006085]	-1.021	-1.124
LOC645294	Homo sapiens misc_RNA (LOC645294), miscRNA [XR_019042]	-1.018	-1.956
FAM175B	Homo sapiens family with sequence similarity 175, member B (FAM175B), mRNA [NM_032182]	-1.013	-1.586

NCRNA00081	Homo sapiens non-protein coding RNA 81 (NCRNA00081), non-coding RNA [NR_024140]	-1.005	-1.052
MYSM1	Homo sapiens mRNA for KIAA1915 protein, partial cds. [AB067502]	-1.002	-1.712
MED7	Homo sapiens mediator complex subunit 7 (MED7), mRNA [NM_004270]	-1.000	-1.183