

**Table S9.** Transcriptional factors tied to the down-regulated DEGs

#	Key TF	Description	# of overlapped genes	P value	FDR
1	<i>Sp3</i>	trans-acting transcription factor 3	7	0.000239	0.00812
2	<i>Esr1</i>	estrogen receptor 1 (alpha)	4	0.000854	0.012
3	<i>Atf2</i>	activating transcription factor 2	3	0.00159	0.012
4	<i>Gtf2i</i>	general transcription factor II I	3	0.00159	0.012
5	<i>Esr2</i>	estrogen receptor 2 (beta)	3	0.00191	0.012
6	<i>Sp1</i>	trans-acting transcription factor 1	11	0.0025	0.012
7	<i>Nr0b2</i>	nuclear receptor subfamily 0, group B, member 2	3	0.00266	0.012
8	<i>Smad4</i>	SMAD family member 4	4	0.00289	0.012
9	<i>Ehmt2</i>	euchromatic histone lysine N-methyltransferase 2	2	0.00319	0.012
10	<i>Egr1</i>	early growth response 1	5	0.00414	0.0141

11	<i>Sp4</i>	trans-acting transcription factor 4	2	0.00584	0.018
12	<i>Ncoa3</i>	nuclear receptor coactivator 3	2	0.00743	0.021
13	<i>Gfi1</i>	growth factor independent 1	2	0.0092	0.024
14	<i>Ppard</i>	peroxisome proliferator activator receptor delta	2	0.0111	0.027
15	<i>Ep300</i>	E1A binding protein p300	4	0.0122	0.0277
16	<i>Xbp1</i>	X-box binding protein 1	2	0.0155	0.0329
17	<i>Cebpb</i>	CCAAT/enhancer binding protein (C/EBP), beta	3	0.0245	0.049
18	<i>Stat3</i>	signal transducer and activator of transcription 3	4	0.0303	0.0573
19	<i>Foxo1</i>	forkhead box O1	3	0.0364	0.0619
20	<i>Smad3</i>	SMAD family member 3	3	0.0364	0.0619
21	<i>Pparg</i>	peroxisome proliferator activated receptor gamma	3	0.0384	0.0621
22	<i>Pitx2</i>	paired-like homeodomain transcription factor 2	2	0.0492	0.0761

23	<i>Creb1</i>	cAMP responsive element binding protein 1	2	0.0775	0.115
24	<i>Rela</i>	v-rel reticuloendotheliosis viral oncogene homolog A (avian)	4	0.107	0.152
25	<i>Spi1</i>	spleen focus forming virus (SFFV) proviral integration oncogene	2	0.119	0.162
26	<i>Crebbp</i>	CREB binding protein	2	0.124	0.163
27	<i>Ppara</i>	peroxisome proliferator activated receptor alpha	2	0.15	0.189
28	<i>E2f1</i>	E2F transcription factor 1	2	0.165	0.194
29	<i>Myc</i>	myelocytomatosis oncogene	2	0.165	0.194
30	<i>Nfkb1</i>	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105	5	0.179	0.203
31	<i>Nfe2l2</i>	nuclear factor, erythroid derived 2, like 2	2	0.187	0.205
32	<i>Ets1</i>	E26 avian leukemia oncogene 1, 5' domain	2	0.219	0.233
33	<i>Ctnnb1</i>	catenin (cadherin associated protein), beta 1	2	0.236	0.243

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34	<i>Trp53</i>	transformation related protein 53	2	0.714	0.714
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Note: data obtained from TRRUST (version 2) (<https://www.grnpedia.org/trrust/>)