SUPPLEMENTAL MATERIAL

Table S1. PCR primer sequences for gene expression assays

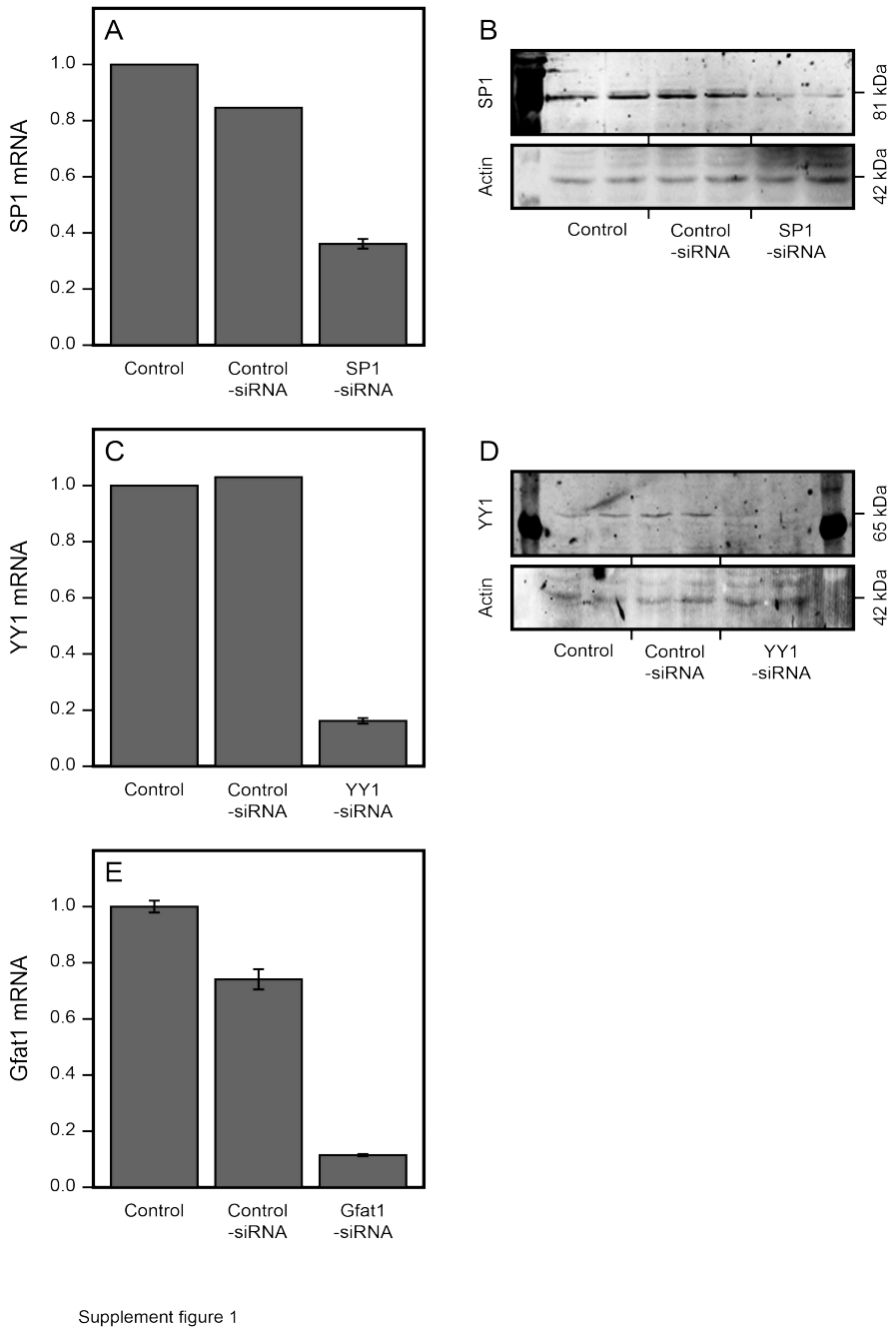
Gene	**Primer sequence (5' to 3')**
Has2	For- CAGAATCCAAACAGACAGTTC Rev- TAAGGTGTTGTGTGTGACTGA
Gfat1	For- GGA TAT GAT TCT GCT GGT GTG Rev- CCA ACG GGT ATG AGC TAT TC
YY1	For- GGAGGAATACCTGGCATTGA Rev- TTCTGCACAGACGTGGACTC
SP1	For- GGAGAGCAAAACCAGCAGAC Rev- AAGGTGATTGTTTGGGCTTG
RPLP0	For- AGATGCAGCAGATCCGCAT Rev- GTGGTGATACCTAAAGCCTG

Table S2: Location of the PCR primer sequences specific for the nine human *Has2* promoter regions schematically shown in Fig. 5 and analyzed for transcription factor binding in Fig. 6.

Gene	**Region**	**Location**	**Primer sequence (5' to 3')**
Has2	1	-32 to +57	GGAGGCAGAAGGGCAACAAC
			GTTCAATGGGCTGCTCGAAGC
	2	-246 to -12	CATTGGAGTTAGAACCGGCC
			GTTGTTGCCCTTCTGCCTCC
	3	-481 to -244	GTTACTTAGCTGAAGGGCACC
			GGCCGGTTCTAAACTCCAATG
	4	-675 to -460	GGCTTTGACACTTGACGTCAG
			GGTGCCCTTCAGCTAAGTAAC
	5	-1048 to -655	CAGTCATCAGCAGGCTTGTTG
			CTGACGTCAAGTGTCAAAGCC
	6	-1338 to -1027	GTGCGACGTGATGAAAGCATC
			CAACAAGCCTGCTGATGACTG
	7	-1613 to -1318	CACCTAGGCGGAGTTCAAAC
			GATGCTTTCATCACGTCGCAC
	8	-1896 to -1554	GGTATTCCCGCATTACGTGTC
			CACTGATTTCCCCCAGCAAC
	9	-2250 to -1874	CTCCTGGGATCTCACAAACAG
			GACACGTAATGCGGGAATACC

Table S3: SiRNA sequences for the gene silencing experiments

Gene	siRNA sequences (5' to 3')
Nonsense/ Control	UGCGCUACGAUCGACGAUG
GFAT1	GGAGGAUACUGAGACCAUU
YY1	1. CCUCCUGAUUAUUCAGAAU 2. GAACUCACCUCCUGAUUAU 3. GGCUGCACAAAGAUGUUCA
SP1	1. CCUGGAGUGAUGCCUAAUA 2. CCAACAGAUUAUCACAAAU 3. CCAGCAACAUGGGAAUUAU



Supplement figure 1

Fig. S1. Efficiency of siRNAs. The siRNAs to block GFAT1, YY1 and SP1 (30 nM, table S3) were transfected to the HaCaT cells with Lipofectamine 2000. After transfection the cells were cultured for 48 h and mRNA and protein levels were analyzed. mRNA levels were normalized to the *RPLP0* control gene as described in Methods, and protein levels were compared to β-actin band (42 kDa). Three different *SP1*-siRNA sequences were tested, the data represent their average inhibition efficiency ± SE (A). The corresponding change in SPI protein is shown in (B). To reduce *YY1* mRNA level, three different *YY1*-siRNA sequences were tested, their efficiences (mean ± SE) are shown in (C), and the levels of YY1 protein in (D). *GFAT1*-siRNA efficiency was analyzed only at mRNA level because specific antibodies were unavailable for GFAT1-protein. The means ± SE shown are from three experiments (E).