

ONLINE SUPPLEMENTARY DATA

Supplementary Table 1. Primer sequences for real-time PCR.

C3AR1-Forward : GTTCGTGTACCGGAAATCTT

C3AR1-Reverse : CAGGCGGCTGAACAATGTTT

CCL5- Forward : CCAGCAGTCGTCTTTGTAC

CCL5- Reverse : CTCTGGGTTGGCACACACTT

CCL7-Forward : GCACTTCTGTGTCTGCTGCT

CCL7-Reverse : AGCTCTCCAGCCTCTGCTTA

CCL8-Forward : TGGAGAGCTACACAAGAATCACC

CCL8-Reverse : TGGTCCAGATGCTTCATGGAA

CCR2-Forward : TGCAAAAAGCTGAAGTGCTTG

CCR2-Reverse : CAGCAGAGTGAGCCCACAAT

CXCL9-Forward : CCAGTAGTGAGAAAGGGTCGC

CXCL9-Reverse : AGGGCTTGGGGCAAATTGTT

CXCL10-Forward : GTGGCATTCAAGGAGTACCTC

CXCL10-Reverse : TGATGGCCTTCGATTCTGGATT

CCL11-Forward : CCCCTCAGCGACTAGAGAG

CCL11-Reverse : TCTTGGGGTTCGGCACAGAT

FLT1-Forward : TTTGCCTGAAATGGTGAGTAAGG

FLT1-Reverse : TGGTTTGCTTGAGCTGTGTTT

GAPDH-Forward : CAGAACATCATCCCTGCCTCTAC

GAPDH-Reverse : TTGAAGTCAGAGGAGACCACCTG

IL1B-Forward : ATGATGGCTTATTACAGTGGCAA

IL1B-Reverse : GTCGGAGATTCGTAGCTGGA

IL10-Forward : TCAAGGCGCATGTGAACTCC

IL10-Reverse : GATGTCAAACCTCACTCATGGCT

PGLYRP1-Forward : GTGGGCTACAACCTCCTGATTG

PGLYRP1-Reverse : TGGGGTTCCATAAGTGACCTG

TNFSF10-Forward : TCGTGCTGATCGTGATCTTC

TNFSF10-Reverse : GCTCGTTGGTAAAGTACACGTA

TNFRSF10D-Forward : GTTGGCTTTTCATGTCGGAAGA

TNFRSF10D-Reverse : CCCAGGAACTCGTGAAGGAC

TNFSF13B-Forward : GGGAGCAGTCACGCCTTAC

TNFSF13B-Reverse : GATCGGACAGAGGGGCTTT

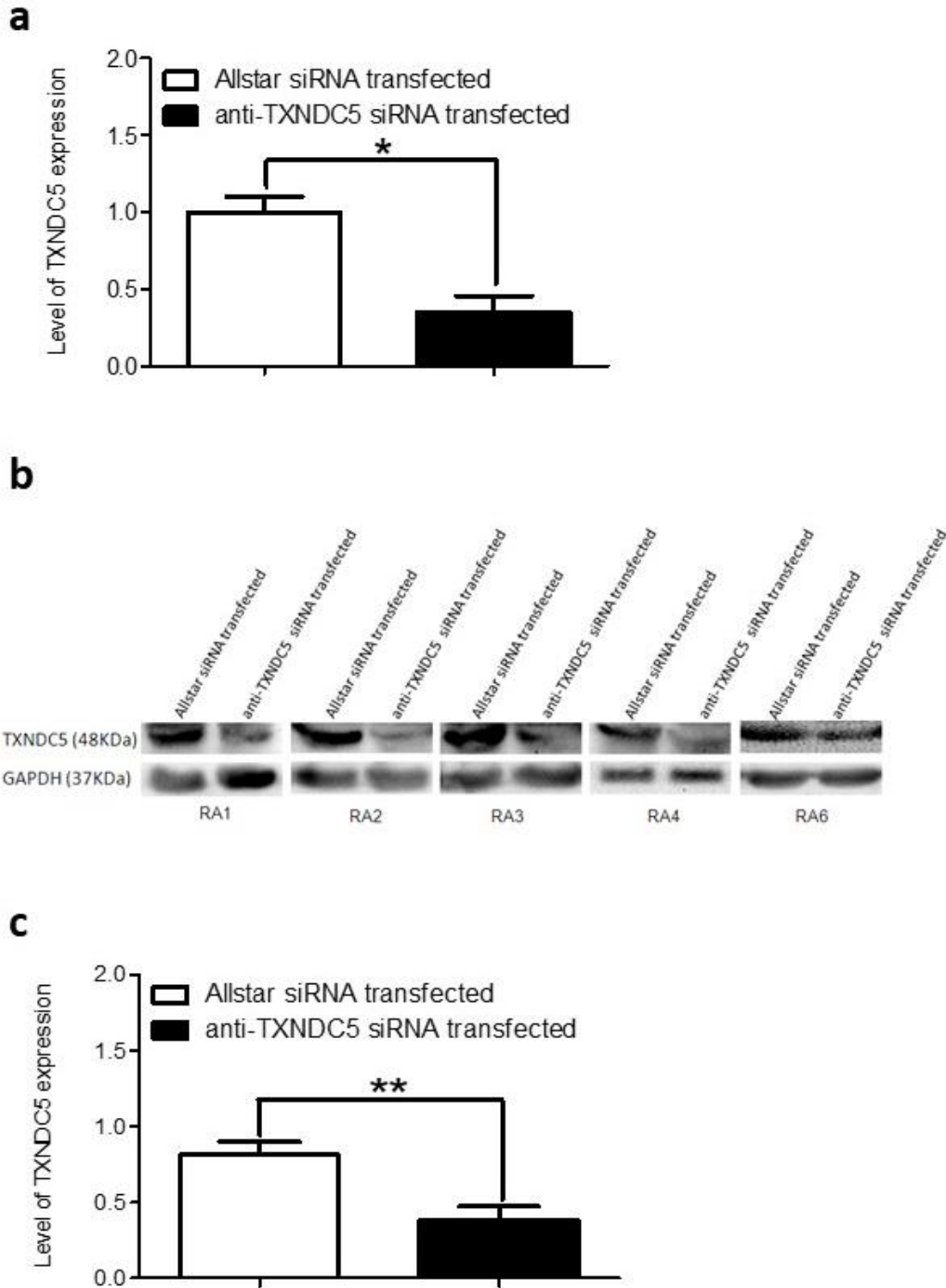
TXNDC5-Forward : CTCTGGGCCTTGAACATT

TXNDC5-Reverse : CCCTCAGTGA CTCAA

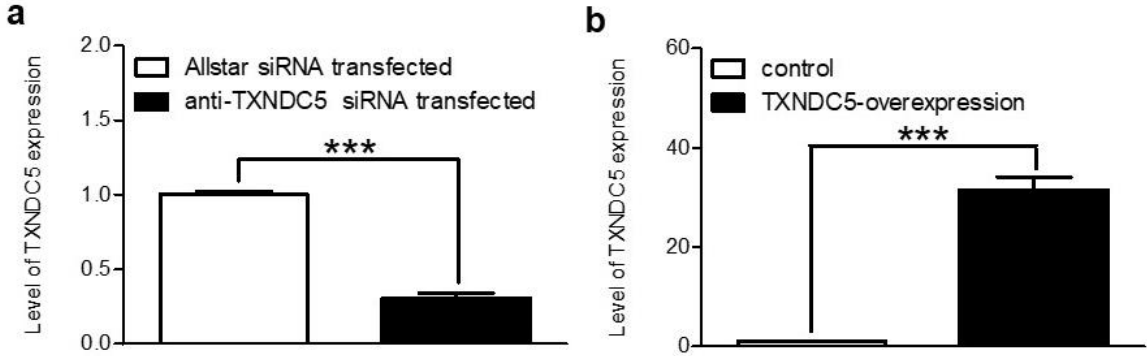
TYMP-Forward : GGTGTGGGTGACAAGGTCAG

TYMP-Reverse : GCAGCACTTGCATCTGCTC

Supplementary Figure 1. Analysis of TXNDC5 expression in anti-TXNDC5 siRNA-transfected RASFs. (a) TXNDC5 mRNA expression was detected using real-time PCR (n=5). (b) TXNDC5 protein expression was detected using western blot analysis (n=5). (c) TXNDC5 protein expression levels were normalized against GAPDH expression levels. Allstars siRNA-transfected cells were used as controls. * indicates $p < 0.05$, and ** indicates $p < 0.01$.



Supplementary Figure 2. Analysis of TXNDC5 expression in RASFs using real-time PCR. (a) TXNDC5 mRNA expression in RASFs (n=8) transfected with anti-TXNDC5 siRNA. (b) TXNDC5 mRNA expression in RASFs (n=5) transfected with TXNDC5-expressing plasmids. *** indicates $p < 0.001$.



Supplementary Table 2. Raw data of PCR array analysis.

Table 4-1. Signal Transduction PathwayFinder PCR Array

Layout	1	2	3	4	5	6	7	8	9	10	11	12	
A	ACSL3 -1.16 OKAY	ACSL4 -1.17 OKAY	ACSL5 1.55 OKAY	ADM -1.55 OKAY	ARNT -1.42 OKAY	ATF4 1.05 OKAY	AXIN2 -2.13 OKAY	BAX -1.56 OKAY	BBC3 1.1 OKAY	BCL2 -1.13 OKAY	BCL2A1 3.42 OKAY	BCL2L1 -1.08 OKAY	gene expression level evaluation
B	BIRC3 1.41 OKAY	BMP2 1.94 OKAY	BMP4 -1.07 OKAY	BTG2 -1.25 OKAY	CA9 2.9 B	CCL5 13.73 OKAY	CCND1 -1.13 OKAY	CCND2 -3.09 OKAY	CDKN1A -1.33 OKAY	CDKN1B -1.15 OKAY	CEBPD -1.41 OKAY	CPT2 -1.07 OKAY	gene expression level evaluation
C	CSF1 -1.06 OKAY	DAB2 -1.67 OKAY	EGFR -1.27 OKAY	EMP1 1.3 OKAY	EPO -1.7 B	FABP1 -1.17 B	FAS -1.28 OKAY	FCER2 1.02 C	FOSL1 1.24 OKAY	FTH1 -1.22 OKAY	GADD45A 1.93 OKAY	GADD45B 1.3 OKAY	gene expression level evaluation
D	GATA3 -1 B	GCLC -1.13 OKAY	GCLM 1.06 OKAY	GSR 1.07 OKAY	HERPUD1 -1.02 OKAY	HES1 1.75 OKAY	HES5 1.19 B	HEY1 1.01 B	HEY2 -1.68 OKAY	HEYL 1.26 B	HMOX1 -1.59 OKAY	ICAM1 1.11 OKAY	gene expression level evaluation
E	ID1 -1.31 OKAY	IFNG 1.02 C	IFRD1 -1.22 OKAY	IRF1 2.35 OKAY	JAG1 -1.55 OKAY	LDHA -1.23 OKAY	LFNG -1.32 OKAY	LRG1 -7.65 B	MCL1 1.27 OKAY	MMP7 -1.11 B	MYC 1.37 OKAY	NOTCH1 1.04 OKAY	gene expression level evaluation
F	NQO1 1.16 OKAY	OLR1 -1.28 B	PCNA 1.03 OKAY	PPARD -1.19 OKAY	PTCH1 -1.19 B	RB1 1.08 OKAY	SERPINE1 -1.15 OKAY	SLC27A4 -1.6 OKAY	SLC2A1 1.78 OKAY	SOCS3 1.09 OKAY	SORBS1 -1.42 A	SQSTM1 -1.03 OKAY	gene expression level evaluation
G	STAT1 2.51 OKAY	TNF 1.65 B	TNFSF10 16.36 OKAY	TXN -1.12 OKAY	TXNRD1 -1.23 OKAY	VEGFA 2.11 OKAY	WISP1 -1.01 OKAY	WNT1 1.02 C	WNT2B -1.01 OKAY	WNT3A 1.02 C	WNT5A 1.28 OKAY	WNT6 1.02 C	gene expression level evaluation

Table 4-2. Inflammatory Response & Autoimmunity PCR Array

Layout	1	2	3	4	5	6	7	8	9	10	11	12	
A	BCL6 -1.51 OKAY	C3 -1.39 OKAY	C3AR1 4.27 A	CCL11 -3.95 B	CCL13 1.87 OKAY	CCL16 2.09 B	CCL17 -2.91 B	CCL19 1.16 C	CCL2 1.39 OKAY	CCL21 1.36 B	CCL22 1.16 C	CCL23 -2.57 B	gene expression level evaluation
B	CCL24 1.16 C	CCL3 1.04 OKAY	CCL4 -1.17 OKAY	CCL5 10.59 OKAY	CCL7 4.37 OKAY	CCL8 4.95 B	CCR1 1.29 OKAY	CCR2 18.92 B	CCR3 1.54 OKAY	CCR4 3.69 B	CCR7 -1.09 OKAY	CD14 -1.93 OKAY	gene expression level evaluation
C	CD40 -1.25 OKAY	CD40LG -2.71 B	CEBPB -1.93 OKAY	CRP 1.16 C	CSF1 -1.65 OKAY	CXCL1 1.43 OKAY	CXCL10 78.52 OKAY	CXCL2 1.49 OKAY	CXCL3 3.04 OKAY	CXCL5 4.91 OKAY	CXCL6 -1.18 OKAY	CXCL9 4.48 A	gene expression level evaluation

D	CXCR1 1.16 C	CXCR2 -1 B	CXCR4 1.39 B	FASLG 3.85 B	FOS -1.19 OKAY	IFNG 1.33 B	IL10 -3.98 B	IL10RB -1.77 OKAY	IL15 1.39 OKAY	IL17A 1.16 C	IL18 -2.29 A	IL1A -1.03 B	gene expression level evaluation
E	IL1B 3.26 OKAY	IL1R1 -3.17 OKAY	IL1RAP -2.27 OKAY	IL1RN 7.44 OKAY	IL22 2.03 B	IL23A 1.12 OKAY	IL23R 1.16 C	IL5 -2.72 B	IL6 1.2 OKAY	IL6R -1.66 OKAY	CXCL8 3.99 OKAY	IL9 1.16 C	gene expression level evaluation
F	ITGB2 -2.31 OKAY	KNG1 1.26 B	LTA 2.21 B	LTB -1.51 B	LY96 -1.35 OKAY	MYD88 1.73 OKAY	NFKB1 -1.63 OKAY	NOS2 2.11 B	NR3C1 -1.4 OKAY	PTGS2 3.46 OKAY	RIPK2 1.42 OKAY	SELE 1.16 C	gene expression level evaluation
G	TIRAP -2.37 OKAY	TLR1 -1.84 OKAY	TLR2 3.37 A	TLR3 3.04 OKAY	TLR4 -2.09 OKAY	TLR5 -2.35 A	TLR6 -1.76 OKAY	TLR7 1.16 C	TLR9 1.5 B	TNF 1.52 B	TNFSF14 1.16 C	TOLLIP -2.21 OKAY	gene expression level evaluation

Table 4-3. TNF Signaling Pathway PCR Array

Layout	1	2	3	4	5	6	7	8	9	10	11	12	
A	AGFG1 1.08 OKAY	ARHGDI B -1.08 B	BAG4 -1.24 OKAY	CAD -1.86 B	CASP2 -1.01 OKAY	CASP3 1.15 OKAY	CASP8 1.33 OKAY	CD27 -3.52 B	CD40 1.38 OKAY	CD40LG -1.1 C	CD70 1.07 OKAY	CHUK 1.12 OKAY	gene expression level evaluation
B	CRADD -1.62 A	DFFA -1.06 OKAY	DUSP1 1.41 OKAY	EDA2R -1.31 OKAY	FADD -1.13 OKAY	FAS -1.05 OKAY	FASLG 1.25 B	IKBKAP -1.05 OKAY	IKBKB 1.23 OKAY	IKBKG -1.05 OKAY	JUN 1.52 OKAY	LMNA -1.29 OKAY	gene expression level evaluation
C	LMNB1 1.19 OKAY	LMNB2 1.05 OKAY	LTA -2.27 B	LTB 2.15 B	LTBR -1.1 OKAY	MADD -1.03 OKAY	MAP2K4 -1.14 OKAY	MAP3K1 -1.24 OKAY	MAP3K7 -1.14 OKAY	MAPK8 -1.04 OKAY	NFKB1 -1.03 OKAY	NFKBIA 1.56 OKAY	gene expression level evaluation
D	NGFR -1.97 B	PAK1 1.03 OKAY	PAK2 -1.02 OKAY	PARP1 -1 OKAY	PGLYRP1 4.94 B	PRKDC 1.15 OKAY	PSMG2 -1.05 OKAY	RB1 1.26 OKAY	RELT 1.31 OKAY	SPTAN1 -1.22 OKAY	TNF 1.79 B	TNFAIP3 2.75 OKAY	gene expression level evaluation
E	TNFRSF1 0A -1.09 OKAY	TNFRSF1 0B 1.07 OKAY	TNFRSF1 0C 1.44 OKAY	TNFRSF1 0D -2.83 OKAY	TNFRSF1 1A -1.01 B	TNFRSF1 1B -1.12 OKAY	TNFRSF1 2A 1.05 OKAY	TNFRSF1 3B -1.1 C	TNFRSF1 3C 1.15 B	TNFRSF1 4 1.59 OKAY	TNFRSF1 7 -1.89 B	TNFRSF1 8 1.78 B	gene expression level evaluation
F	TNFRSF1 9 -1.61 OKAY	TNFRSF1 A -1.2 OKAY	TNFRSF1 B 1.53 OKAY	TNFRSF2 1 1.03 OKAY	TNFRSF2 5 -1.47 B	TNFRSF4 -1.1 C	TNFRSF6 B -1.03 OKAY	TNFRSF8 -1.11 B	TNFRSF9 -1.48 B	TNFSF10 21.52 OKAY	TNFSF11 1.62 B	TNFSF12 -1.38 OKAY	gene expression level evaluation
G	TNFSF13 1.31 B	TNFSF13 B 11.1 OKAY	TNFSF14 3.4 B	TNFSF15 -1.11 OKAY	TNFSF18 6.08 B	TNFSF4 1.46 B	TNFSF8 1.11 B	TNFSF9 1.54 OKAY	TRADD 1.01 OKAY	TRAF1 -1.11 OKAY	TRAF2 -1.02 OKAY	TRAF3 -1.23 OKAY	gene expression level evaluation

Table 4-4. Angiogenesis PCR array

Layout	1	2	3	4	5	6	7	8	9	10	11	12	
A	AKT1 1.37 OKAY	ANG -1.32 OKAY	ANGPT1 -1.38 OKAY	ANGPT2 1.13 B	ANGPTL4 -1.58 OKAY	ANPEP 1.31 OKAY	ADGRB1 -1.75 B	CCL11 -4.27 B	CCL2 2.51 OKAY	CDH5 -1.22 OKAY	COL18A1 -1.34 OKAY	COL4A3 -1.7 B	gene expression level evaluation
B	CTGF -1.59 OKAY	CXCL1 2.05 OKAY	CXCL10 86.43 OKAY	CXCL5 6.08 OKAY	CXCL6 1.52 OKAY	CXCL9 5.34 A	EDN1 -1.23 OKAY	EFNA1 -1.02 B	EFNB2 -1.33 OKAY	EGF 1.38 OKAY	ENG -1.17 OKAY	EPHB4 -1.84 OKAY	gene expression level evaluation
C	ERBB2 -1.44 OKAY	F3 2.75 OKAY	FGF1 -1.01 OKAY	FGF2 -1.08 OKAY	FGFR3 -2.13 A	FIGF 1.3 B	FLT1 4.04 B	FN1 -1.21 OKAY	HGF -1.23 OKAY	HIF1A -1.15 OKAY	HPSE -1 OKAY	ID1 -1.35 OKAY	gene expression level evaluation
D	IFNA1 -1.08 B	IFNG -1.08 B	IGF1 -2.57 OKAY	IL1B 4.66 OKAY	IL6 1.5 OKAY	CXCL8 4.88 OKAY	ITGAV -2.11 OKAY	ITGB3 1.29 OKAY	JAG1 -1.52 OKAY	KDR 1.68 B	LECT1 1.17 C	LEP -1.38 B	gene expression level evaluation
E	MDK 2.73 OKAY	MMP14 -1.59 OKAY	MMP2 -1.68 OKAY	MMP9 -1.11 OKAY	NOS3 1.17 C	NOTCH4 -1.03 OKAY	NRP1 -1.14 OKAY	NRP2 -1.74 OKAY	PDGFA 1.07 OKAY	PECAM1 1.22 B	PF4 3.07 OKAY	PGF 1.09 OKAY	gene expression level evaluation
F	PLAU -2.08 OKAY	PLG 1.17 C	PROK2 1.17 C	PTGS1 -1.66 OKAY	S1PR1 -1.41 OKAY	SERPINE1 -1.17 OKAY	SERPINF1 -1.47 OKAY	SPHK1 -1.08 OKAY	TEK -1.37 OKAY	TGFA 1.21 B	TGFB1 -1.14 OKAY	TGFB2 -1.11 OKAY	gene expression level evaluation
G	TGFBR1 -2.02 OKAY	THBS1 1.16 OKAY	THBS2 -2.27 OKAY	TIE1 3.04 B	TIMP1 -1.01 OKAY	TIMP2 -1.48 OKAY	TIMP3 -1.42 OKAY	TNF 2.57 B	TYMP 4.6 OKAY	VEGFA 2.37 OKAY	VEGFB -1.24 OKAY	VEGFC 1.77 OKAY	gene expression level evaluation

Supplementary Figure 3. Real-time PCR analysis of C3AR1, CCL7, CCL8, CCL11, CCR2, CXCL9, CXCL10, FLT1, IL10, PGLYRP1, TNFSF10, TNFRSF10D and TNFSF13B mRNA levels in RASFs transfected with anti-TXNDC5 siRNA. The expression levels of the above target genes in RASFs with transfection of Allstars siRNA (hollow box) were set as “1”, and the expression of these target genes in RASFs transfected with anti-TXNDC5 siRNA (solid box) were normalized to the expression of the corresponding genes in the controls. When RASFs were transfected with TXNDC5-expressing plasmids, the expression levels of the above target genes in the blank plasmid-transfected RASFs (left twill) were set as “1”, and expression levels of these target genes in RASFs transfected with TXNDC5-expressing plasmids (right twill) were normalized to expression levels of the corresponding genes in the controls. The data are presented as the mean \pm SD. * indicates $p < 0.05$, ** indicates $p < 0.01$, and *** indicates $p < 0.001$.

