Supplementary Materials

Effects of tenascin C on the integrity of extracellular matrix and skin aging

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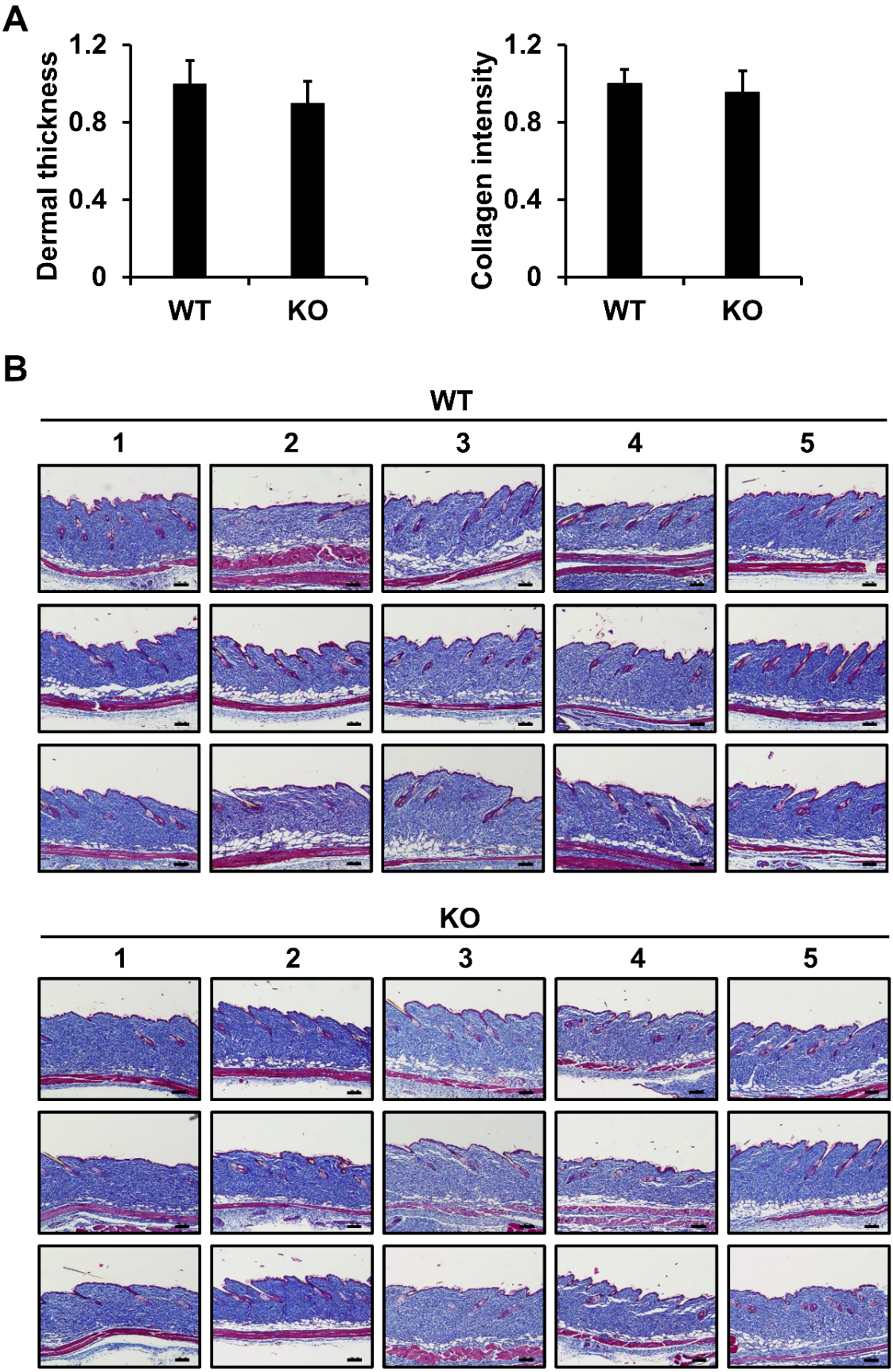
Supplementary Table S1. Primer sequences used for RT-PCR of mouse *Tnc* and human *COL1A1*, *COL1A2*, *MMP1*, *TGF-β1*, *TGF-β2*, *TGF-β3*, *and GAPDH* mRNAs.

Gene Name	Nucleotide Sequence	Nucleotide Position	Annealing Temp. (℃)	GenBank #
m*Tnc*	5'-ACTGTCATCGTGTCAACCTGATGG-3' 5'-TCCAGATTTCGGAAGTTGCTGG-3'	6289-6312 6430-6409	52.5	NM_011607
h*COL1A1*	5'-ACAGCGTCACTGTCGATGGCTG-3' 5'-GGAGGGAGTTTACAGGAAGCAGACAG-3'	4341-4372 4522-4497	55	NM_000088
h*COL1A2*	5'- GAGGGCAACAGCAGGTTCACTTACAC-3' 5′-GTCAGCACCACCGATGTCCAA AG-3'	4044-4069 4196-4174	55	NM_000089
h*MMP1*	5'-GTACTGATATAATTTAGTTC -3' 5'-GTTATCCCTTGCCTATCTAG -3'	1656-1675 1908-1889	45	NM_002421
h*TGF-β1*	5′-ACACGCAGTACAGCAAGGTCCTGG- 3′ 5-GGAGCGCACGATCATGTTGGAC-3′	1876-1899 2036-2015	67	NM_000660
h*TGF-β2*	5′-GCAGAAGAGGTATCCTCATGCTGGG-3′ 5′-CAAACAACTTCACTTTGGATTCCCG- 3′	4481-4505 4642-4618	67	NM_003238
h*TGF-β3*	5′-TACAACACTCTGAACCCTGAAGCATC-3′ 5′-CAAGACTTCACCACCATGTTGGAG-3′	2195-2220 2328-2305	62	NM_003239
h*GAPDH*	5'-ACTGCTTAGCACCCCTGGCCA-3' 5'-TTGGCAGTGGGGACACGGAAG-3'	488-508 740-720	55	BC023632

h: human, and m: mouse

Supplementary Figure S1



Supplementary Figure 1. Analysis of dermal thickness and collagen intensity in skin tissues of *Tnc* knockout and wild-type mice

Formalin-fixed and paraffin-embedded sections of skin tissues from *Tnc* knockout (KO) and wild-type (WT) C57BL6 mice (6 weeks old) were deparaffinized and stained with Masson's trichrome [1]. Dermal thickness [2] and collagen intensity [3] in the dermis were measured as the width or staining intensity at five locations in each tissue section using Image J software (National Institutes of Health, Bethesda, MD, USA). Five mice from each group and three separate blocks of skin tissues from each mouse were evaluated. (A) Graphs showing relative dermal thickness and collagen intensity in five *Tnc* KO mice compared with WT mice. (B) Three blocks of skin tissues from five *Tnc* KO or WT mice, each stained with Masson's trichrome are shown. Bar = 100 μm.

Supplementary References

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2. Terao, M.; Tani, M.; Itoi, S.; Yoshimura, T.; Hamasaki, T.; Murota, H.; Katayama, I. 11beta-hydroxysteroid dehydrogenase 1 specific inhibitor increased dermal collagen content and promotes fibroblast proliferation. *PLoS One* **2014,** *9*, e93051.
3. Chen, Y.; Yu, Q.; Xu, C. B. A convenient method for quantifying collagen fibers in atherosclerotic lesions by ImageJ software. *Int. J. Clin. Exp. Med.* **2017,** *10*, 14904-14910.