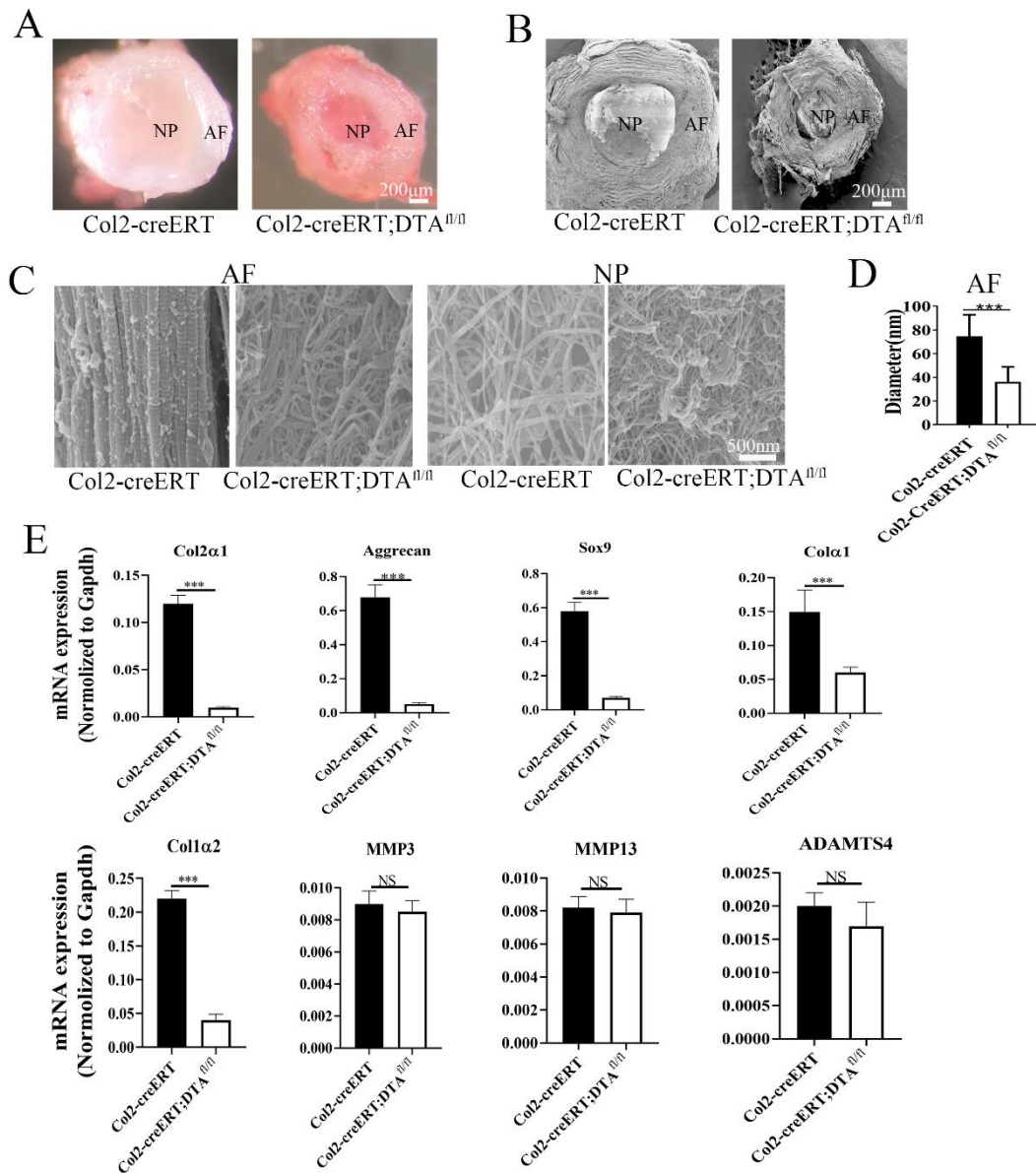


Supplementary figure 1



Supplementary figure 1. Postnatal deletion of Col2+ cells impair IVD extracellular matrix formation and organization

(A) Gross appearance of IVD (with removing of superior endplate cartilage) from 4-week-old Col2-creERT and Col2-creERT;DTA^{fl/fl} mice. Scale bar: 200µm. (B) Representative SEM images of IVD (with removing of superior endplate cartilage) from 4-week-old Col2-creERT and Col2-creERT;DTA^{fl/fl} mice. Scale bar: 200µm. (C) High-magnification (50,000X) comparison collagen fibers in AF and NP tissue from

Col2-creERT and Col2-creERT;DTA^{fl/fl} mice. Scale bar: 500nm. (D) The randomly calculated mean diameter of 80 collagen fibrils in AF from Col2-creERT and Col2-creERT;DTA^{fl/fl} mice. (E) Real time RT-PCR analysis of IVD tissue from Col2-creERT and Col2-creERT;DTA^{fl/fl} mice (mean \pm SD). (N=5, triplicates per group). Levels of Col2 α 1, Aggrecan, Sox9, Col1 α 1, Col1 α 2 were lower in Col2-creERT;DTA^{fl/fl} mice. Levels of MMP3, MMP13, and ADAMTS4 were not different between Col2-creERT and Col2-creERT;DTA^{fl/fl} mice. Statistical significance was determined by one-way ANOVA and Student's t-test. *P < .05, **P < .01, ***P < .0001. NS = not statistically significant.

Supplementary table 1: Primer

	Forward	Reverse
<i>Sox9</i>	5'-TCCCCGCAACAGATCTCCTA-3'	5'-AGGTGGAGTAGAGCCCTGAG-3'
<i>Aggrecan</i>	5'-CGTTGCAGACCAGGAGCAAT-3'	5'-AGGAGTGACAATGCTGCTCA -3'
<i>MMP3</i>	5'-GGCCTGGAACAGTCTTGGC-3'	5'-TGTCCATCGTTCATCATCGTCA-3'
<i>MMP13</i>	5'-CTTTGGCTTAGAGGTGACTGG-3'	5'-ACTTCAGAATGGGACATATCAGG-3'
<i>ADAMTS4</i>	5'-CACTGTGGCTCACGAAATCG-3'	5'-GGAACCAAAGGTCTCTTCACAGA-3'
<i>Col1α1</i>	5'-GCAACAGTCGCTTCACCTACA-3'	5'-CAATGTCCAAGGGAGCCACAT-3'
<i>Col1α2</i>	5'-GGAGGGAACG-GTCCACGAT-3'	5'-GAGTCCGCGTATCCACAA-3'
<i>Col2α1</i>	5'-GCAGAAATGGGCAGAGGTATAA-3'	5'-AGTCTGGGTCTTCACAGATAATG-3'
<i>GAPDH</i>	5'-CACATTGGGGGTAGGAACAC-3'	5'-AACTTTGGCATTGTGGAAGG -3'