## **Supplementary Information**

## Aggrecanase-selective tissue inhibitor of metalloproteinase-3 (TIMP3) protects articular cartilage in a surgical mouse model of osteoarthritis

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**Supplementary Figure S1:** Representative images of Safranin-O stained sections of the medial condyle and tibial plateau of non-transgenic mice (WT), TIMP3-Tg heterozygous, and [-1A] TIMP3-Tg heterozygous in skeletally mature mice at 18 weeks of age to show similarity of the articular cartilage proteoglycan composition. Bars, 200 µm.

**Supplementary Figure S2**: (a) Comparison of expression in transgenic mice by determining  $\beta$ -galactosidase activity in [-1A]TIMP3 line 7 (n=7) and [-1A]TIMP3 line (n=5, line 7). Values represent the mean ± SEM. (b) Representative images of Safranin-O stained sections from [-1A]TIMP3 lines 7 and 13 showing that cartilage was protected in mice expressing high levels of the [-1A]TIMP3 transgene (line 7) but not in low expressing transgenic line 13. (c) Histological maximum and summed scores of joints, 8 weeks after the induction of DMM or sham operated control



WT

[-1A]TIMP3-Tg









С

b

а