

## **SUPPLEMENTAL DATA**

### **Recombinant Decorin Fusion Protein Attenuates Murine Abdominal Aortic Aneurysm Formation and Rupture**

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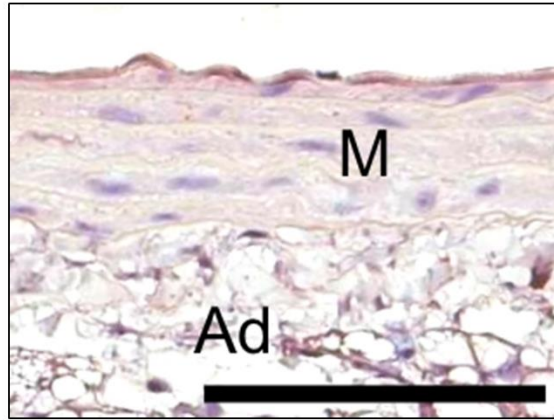
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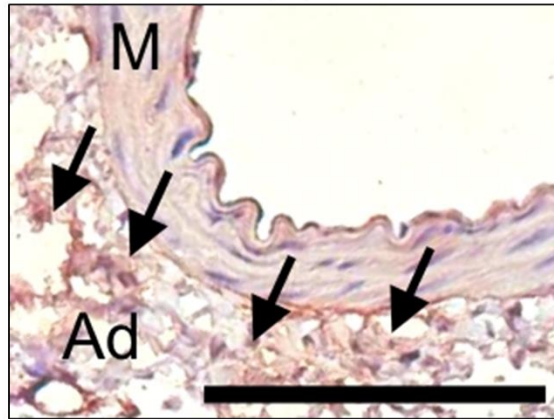
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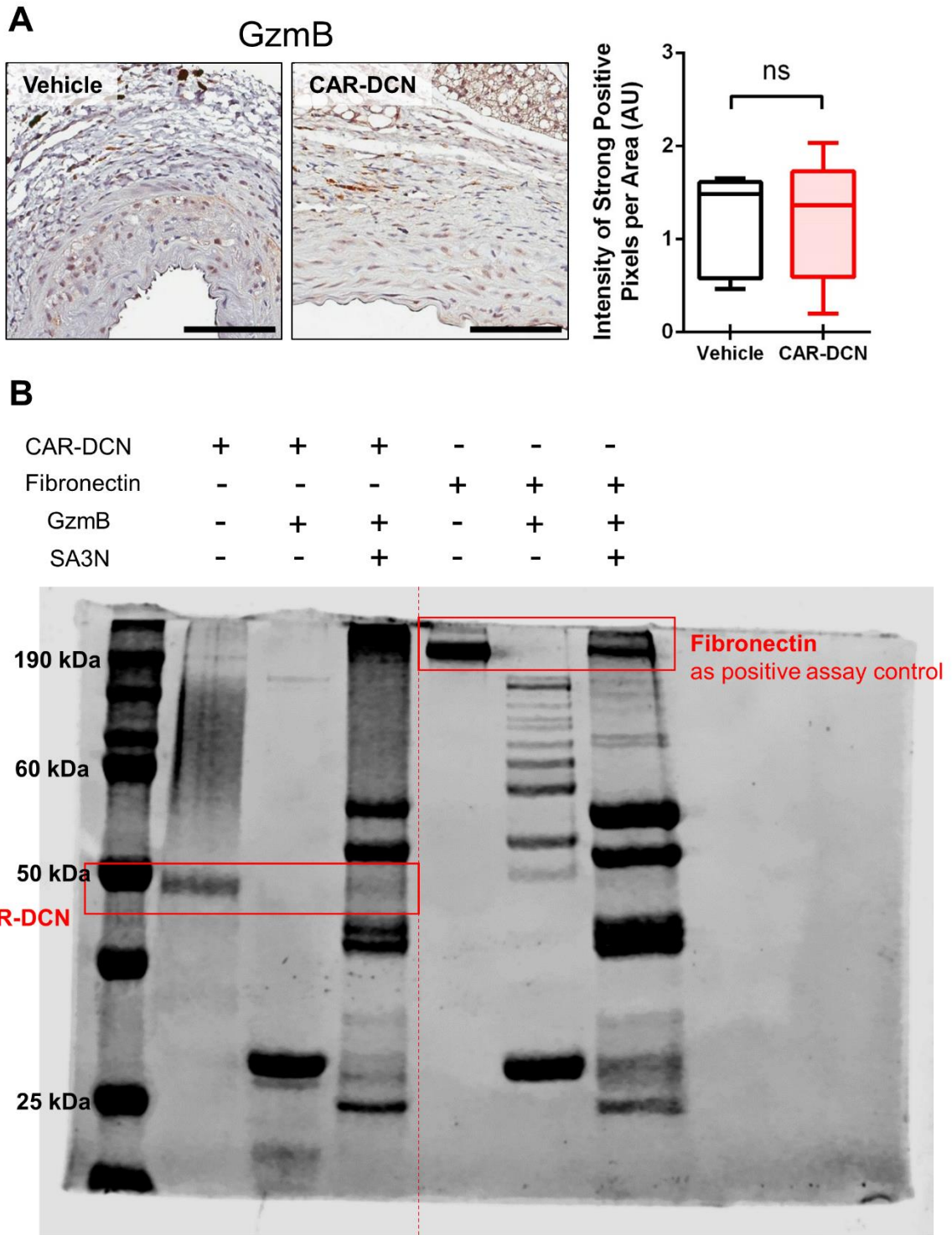
Control peptide



CAR peptide



**Supplemental Figure S1. CAR peptide accumulates at adventitia layer of abdominal aorta.** Representative FITC/FAM staining of adventitia in abdominal aortas from Ang II-infused ApoE-KO mice treated with FAM-labelled control peptide (upper) or FITC-labelled CAR peptide (lower). Arrows indicate the positive CAR staining. Scale bar: 100  $\mu$ m.



**Supplemental Figure S2**

**Supplemental Figure S2. CAR-DCN treatment does not affect aortic GzmB expression. (A)** Representative GzmB staining (left) and quantification of GzmB staining intensity (right) in adventitia of abdominal aortas from surviving ApoE-KO mice in different treatment groups ( $n \geq 5$  per group). Scale bar: 100  $\mu\text{m}$ . Results are expressed as box-and-whisker plot, ns = not significant. **(B)** GzmB-mediated CAR-DCN cleavage assay. The presence of SA3N inhibits GzmB-mediated CAR-DCN cleavage. Fibronectin was used as positive control.

Days after surgery										Color Key	
0	1	2	3	4	5	6	7	8	9	iv	sac
10	11	12	13	14	15	16	17	18	19	ip	NT
20	21	22	23	24	25	26	27	28			

**Supplemental Figure S3**

**Supplemental Figure S3. Treatment Regimen.** Paradigm for regimen of CAR-DCN or vehicle administration in Ang II-infused ApoE-KO mice. iv, intravenous injection; ip, intraperitoneal injection; sac, sacrifice; NT, no treatment.