

SUPPLEMENTARY INFORMATION

Extended Table S1 and Figures S1-S7.

Supplementary Table S1. Listing of Individual Animals.

Animal	Sex	Kg	Inclusion	Time (months)				Sacrifice (months)	Randomized
				Pre-Inj	Post-Inj, Pre-Treat	Mid Treat	Post-Treat		
M1	F	5.0	Yes	-0.5	1	4	6	16	Vehicle
M2	F	4.8	Yes	-0.5	1	4	6	16	NgR-Fc
M3	F	6.5	Yes	-0.5	1	4	6	15	Vehicle
M4	F	4.8	Yes	-0.5	1	4	6	16	NgR-Fc
M5	F	5.1	Yes	-0.5	1	4	6	14	Vehicle
M6	F	4.2	Yes	-0.5	1	4	6	14	NgR-Fc
M7	F	5.6	Yes	-0.5	1	4	6	13	Vehicle
M8	F		Euthanized prior to randomization	-0.5					
M9	F		Euthanized due to catheter	-0.5	1				NgR-Fc
M10	F		Euthanized prior to randomization	-0.5					
M11	F	7.2	Yes	-0.5	1	4	6	8	NgR-Fc
M12	F	5.8	Yes	-0.5	1	4	6	9	Vehicle
M13	F	5.4	Yes	-0.5	1	4	6	8	NgR-Fc
M14	F	4.8	Yes	-0.5	1	4	6	7	Vehicle
M15	F	5.3	Yes	-0.5	1	4	6	9	NgR-Fc
M16	F	4.7	Yes	-0.5	1	4	6	7	NgR-Fc

Supplementary Figure S1: NeuroScore Reveals no Safety Issues.

The NeuroScore measures neurological deficit from no deficit (0) to maximum impairment (54) (Sasaki *et al.*, 2011). The graph shows the NeuroScore value for the 13 animals completing the study as a function of time with 0 being the day of SCI. Data are mean \pm sem for 6 in the Vehicle group and 7 in the NgR-Fc group.

Supplementary Figure S2: Lesion measurements.

The stacked bar charts show the lesion measurements from each individual animal. The gray bar indicates the non-lesion side of spinal cord; the green bar indicates where does the lesion start; the red bar indicates the lesion. Each graph is a composite of the measurements of a set of horizontal spinal cord sections spaced at intervals of 180 μ m across the spinal cord. Dorsal is up. (A) Lesion measurements from the animals with vehicle treatment (n=5). (B) Lesion measurements from the animals with NgR-Fc treatment (n=7).

Supplementary Figure S3: Lesion Size and Gliosis as a Function of Survival Time and Treatment.

The lesion size and gliosis data from main Figures 3 and 4 are stratified into two groups as defined in Fig. 1B, those with survival of 14-16 months versus those with a survival time of 7-9. (A) Regraph of stratified data from Fig. 3G. (B) Regraph of stratified data from Fig. 3G. (C) Regraph of stratified data from Fig. 4C. (D)

Regraph of stratified data from Fig. 4D. For all panels, mean \pm sem with individual animals indicated. There are no significant differences for different survival times (one-way ANOVA).

Supplementary Figure S4: NgR-Fc treatment increases growth of CST fibers caudal to the injury.

(A) Representative image of a horizontal section of spinal cord stained with BDA (green) and anti-GFAP (red) from a NgR-Fc-treated animal distinct from that in Fig. 7 and Suppl. Fig. S3. Rostral to the left and right side is up. Scale bar, 2000 μ m. The area in the white boxes is magnified in (B-E).

Supplementary Figure S5: NgR-Fc treatment increases growth of CST fibers caudal to the injury.

(A) Representative image of a horizontal section of spinal cord stained with BDA (green) and anti-GFAP (red) from a NgR-Fc-treated animal distinct from that in Fig. 7 and Suppl. Fig. S2. Rostral to the left and right side is up. Scale bar, 2000 μ m. The area in the white boxes is magnified in (B-E).

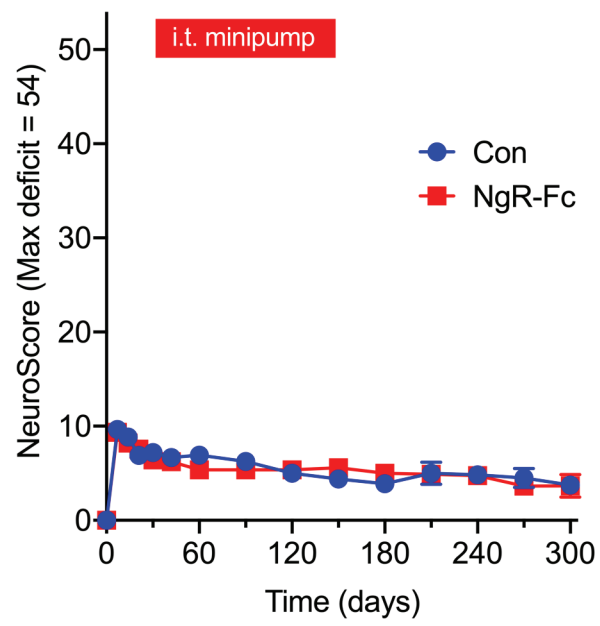
Supplementary Figure S6: CST fibers caudal to the injury in Control SCI animal.

(A) Representative image of a horizontal section of spinal cord stained with BDA (green) and anti-GFAP (red) from a Vehicle-treated animal different from that in Fig. 7. Rostral to the left and right side is up. Scale bar, 2000 μ m. The area in the white boxes is magnified in (B-E).

Supplementary Figure S7: CST fibers growth as a function of survival time.

The Total CST Axon Index data from Fig. 8C are stratified into two groups as defined in Fig. 1B, those with survival of 14-16 months versus those with a survival time of 7-9. Unpaired two-tailed *t* test with Holm-Sidak correction for multiple comparisons. Mean \pm sem, with individual animals indicated.

Supplementary Figure S1



Supplementary Figure S2

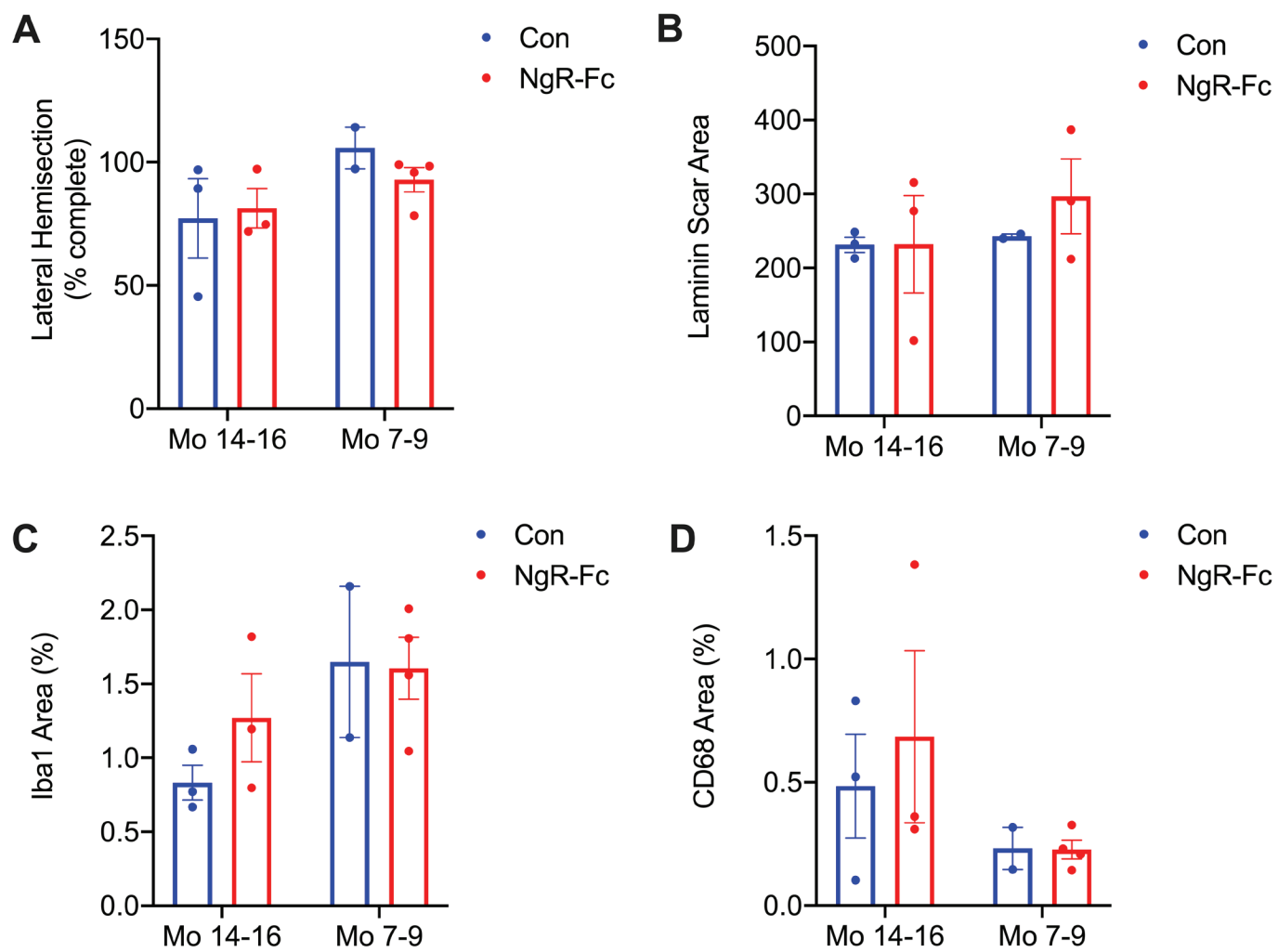
A Control



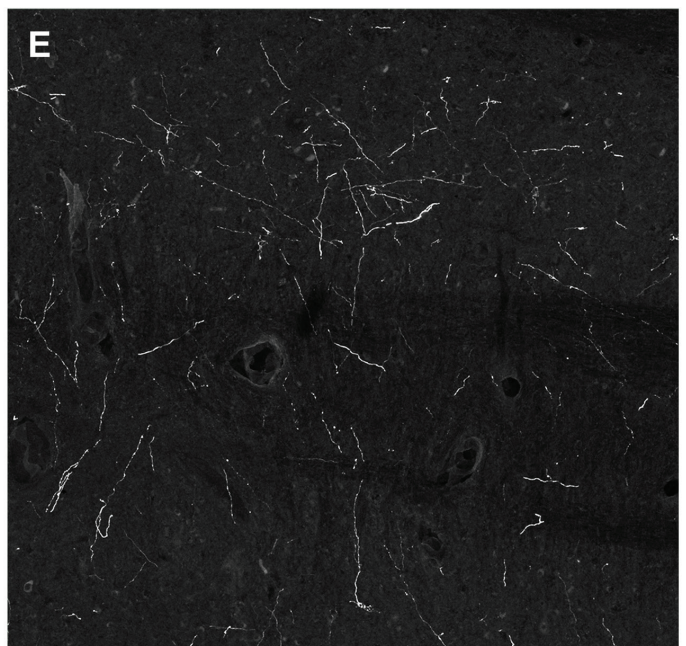
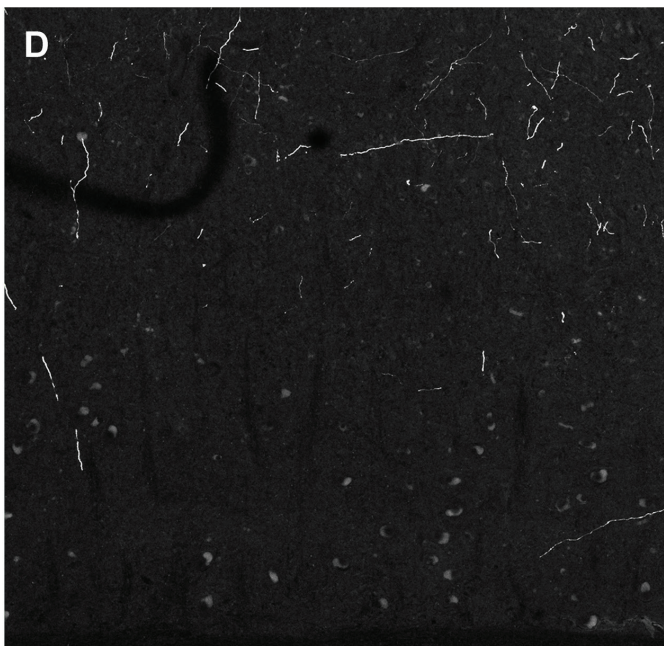
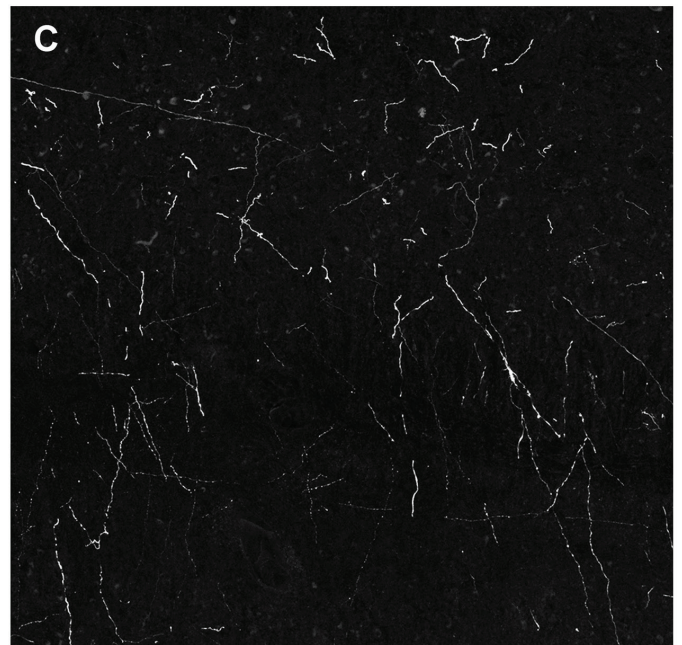
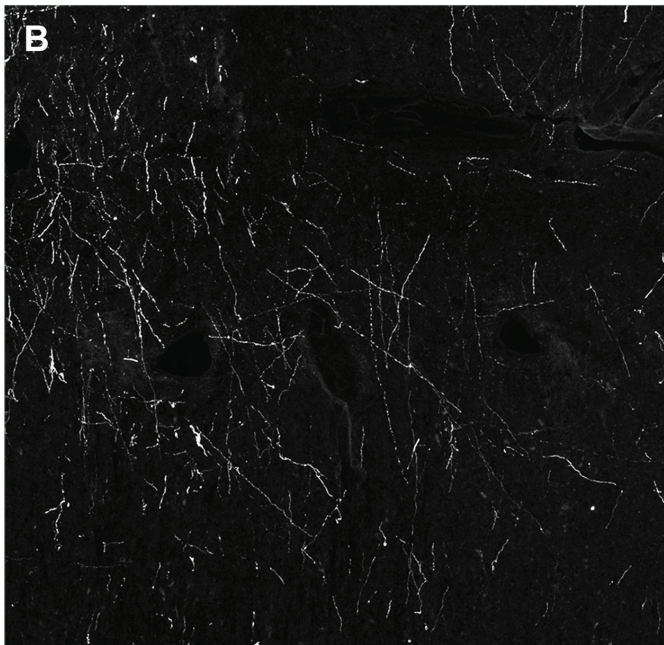
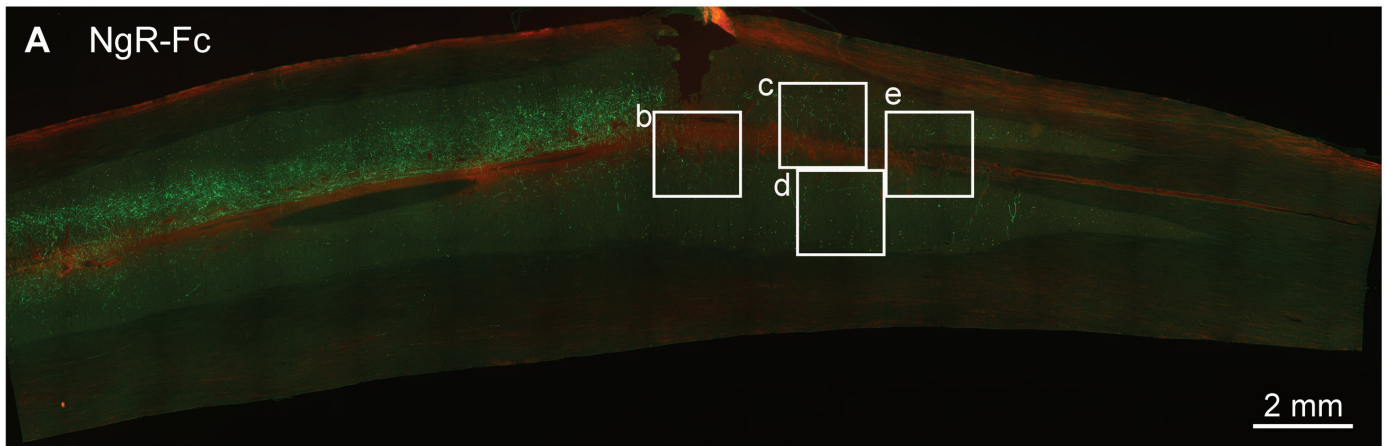
B NgR-Fc



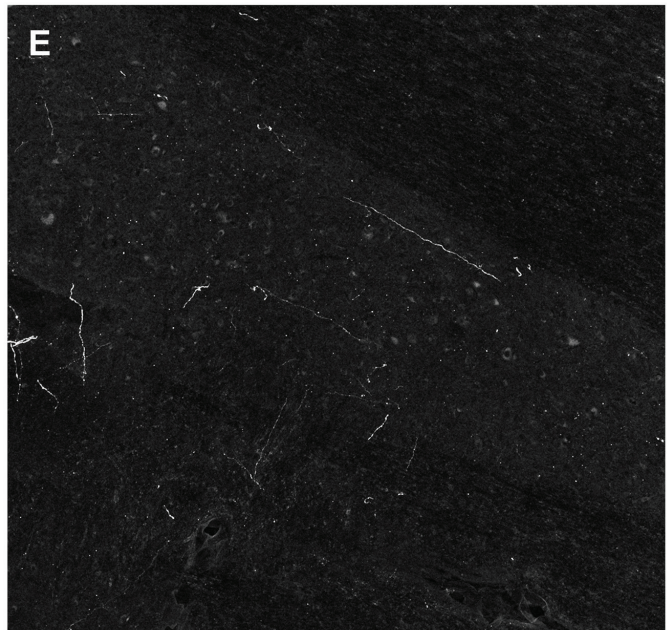
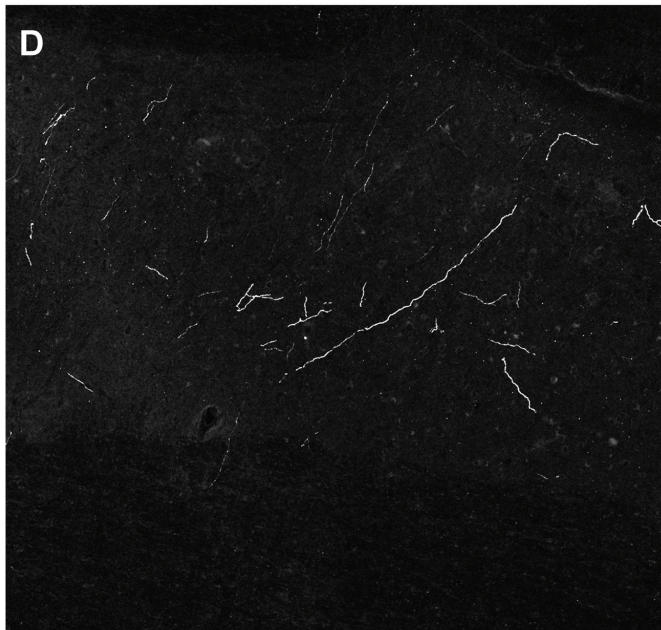
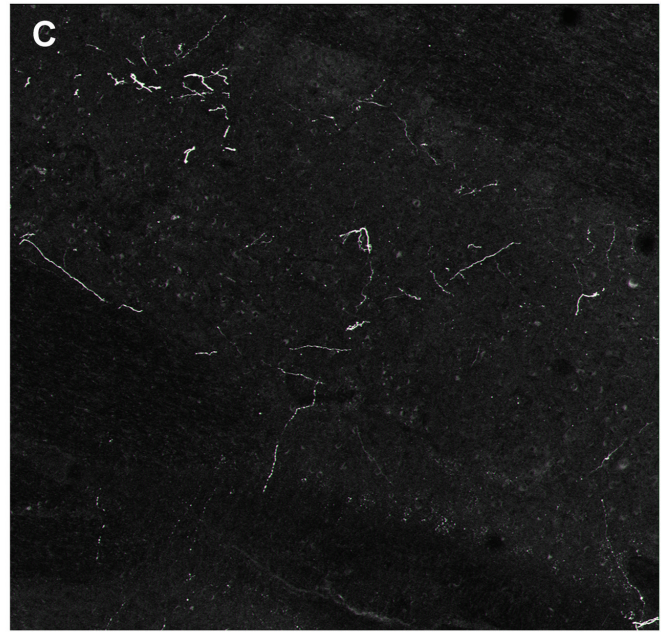
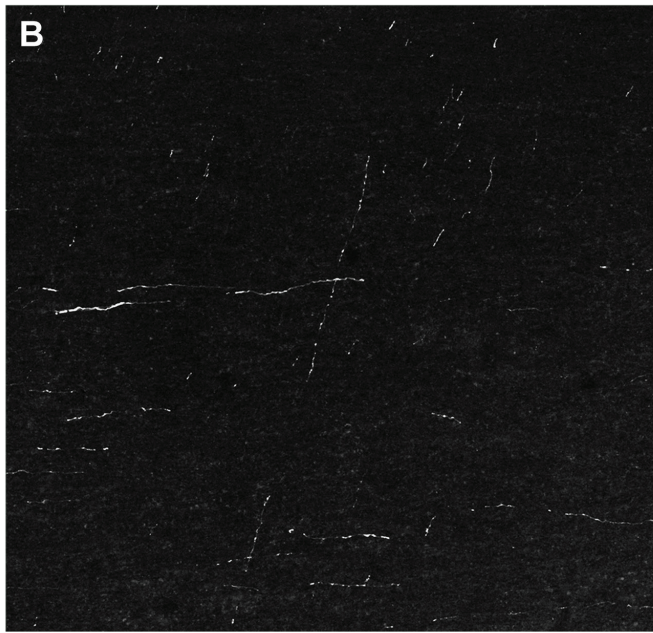
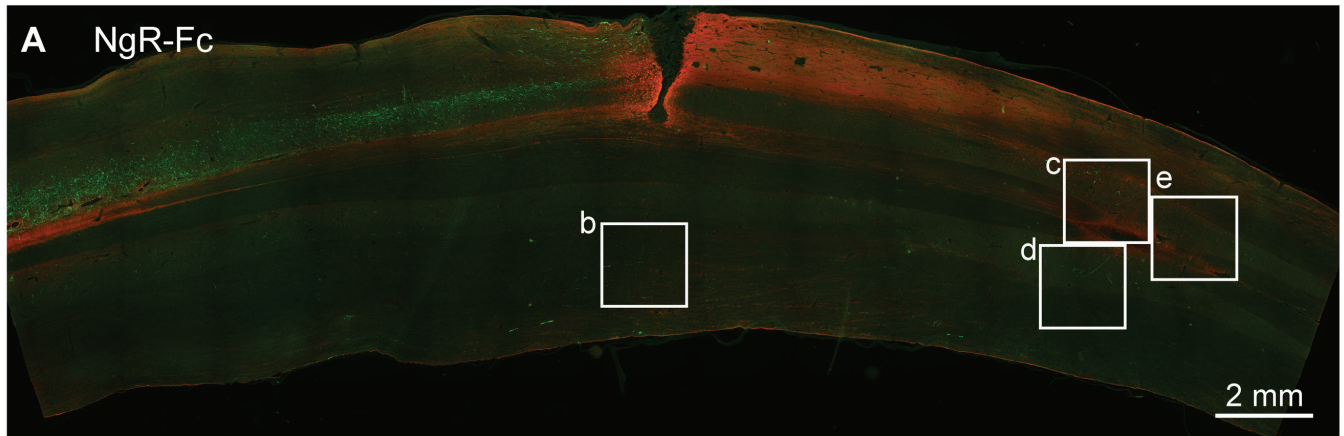
Supplementary Figure S3



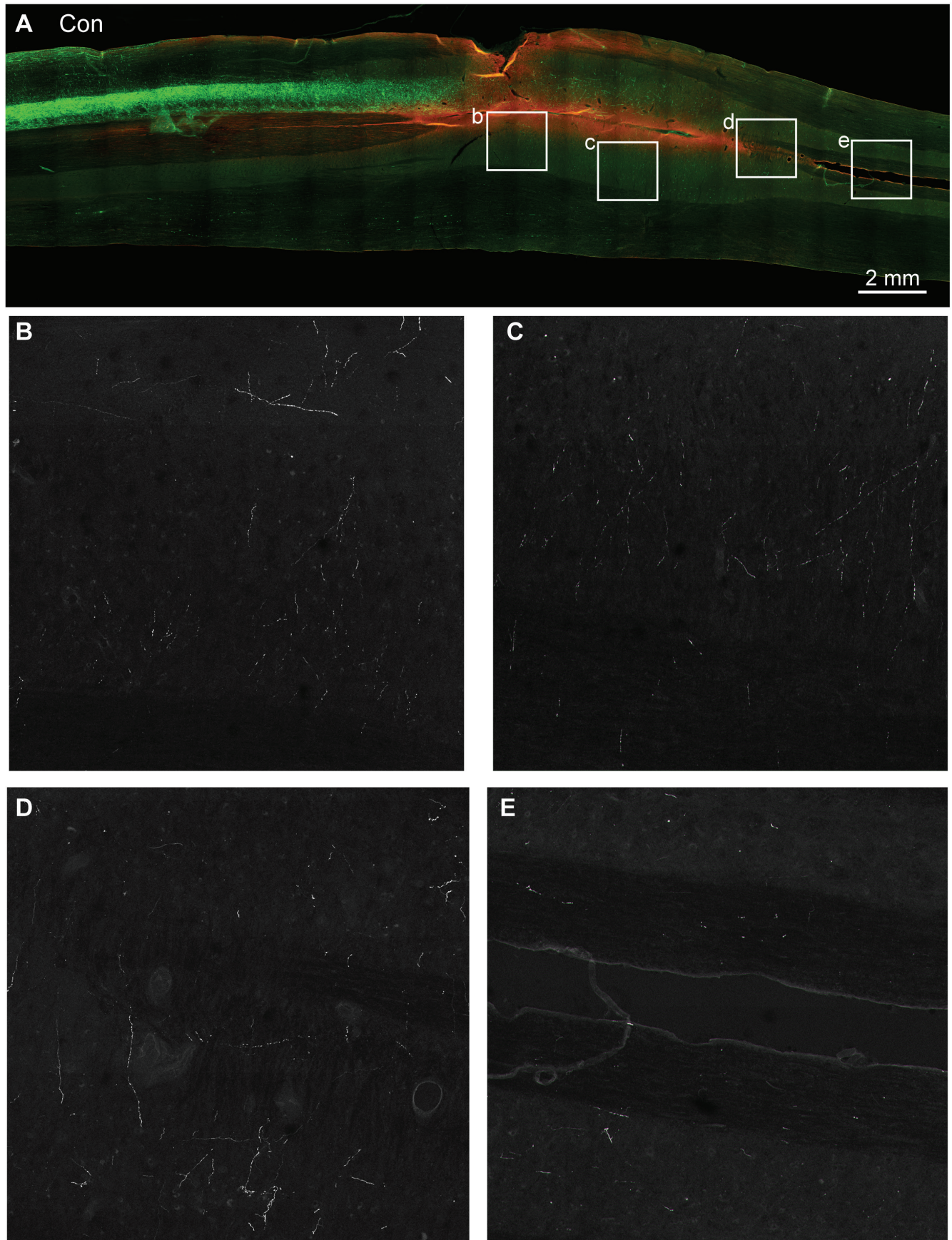
Supplementary Figure S4



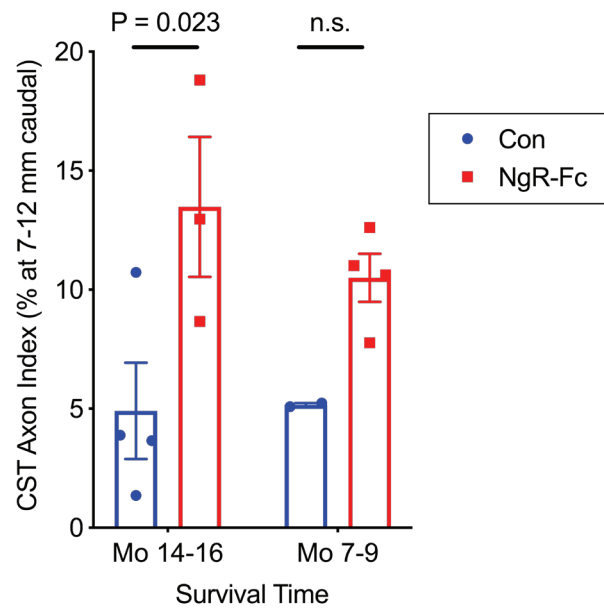
Supplementary Figure S5



Supplementary Figure S6



Supplementary Figure S7



Reference for Supplement

Sasaki M, Honmou O, Radtke C, Kocsis JD. Development of a middle cerebral artery occlusion model in the nonhuman primate and a safety study of i.v. infusion of human mesenchymal stem cells. PLoS One 2011; 6(10): e26577.