

**Table S1.** Antibodies and the respective rexed laminae analyzed.

Antibody	Analyzed laminae
Synaptophysin	I and II, V and VI, IX
VGLUT1	III, V and VI, IX
GAD65	III
GFAP	I and II, IX
GAP-43	Dorsal roots, laminae I and II, V and VI, IX

**Table S2.** GFAP immunolabeling quantification at laminae I and II (integrated density of pixels). The values are presented as mean  $\pm$  standard error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	2.19 $\pm$ 1.19/5	2.15 $\pm$ 0.57/5	2.45 $\pm$ 0.33/6
<b>4 weeks</b>	4.66 $\pm$ 1.22/5	2.63 $\pm$ 0.32/5	1.83 $\pm$ 0.19/5
<b>8 weeks</b>	5.81 $\pm$ 1.38/5	3.38 $\pm$ 0.65/6	2.43 $\pm$ 0.25/5

FS, fibrin sealant; MC, mononuclear cells; RZ, rhizotomy.

**Table S3.** GFAP immunolabeling quantification at lamina IX (integrated density of pixels). The values are presented as mean  $\pm$  standard error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	1.84 $\pm$ 0.25/5	1.62 $\pm$ 0.31/5	1.73 $\pm$ 0.26/5
<b>4 weeks</b>	1.66 $\pm$ 0.11/5	2.27 $\pm$ 0.61/5	1.49 $\pm$ 0.08/5
<b>8 weeks</b>	3.36 $\pm$ 0.55/5	1.80 $\pm$ 0.25/6	1.40 $\pm$ 0.15/5

FS, fibrin sealant; MC, mononuclear cells; RZ, rhizotomy.

**Table S4.** Iba1 immunolabeling quantification at laminae I and II (integrated density of pixels). The values are presented as mean  $\pm$  standard error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	4.34 $\pm$ 0.55/5	2.94 $\pm$ 0.33/5	4.04 $\pm$ 0.31/5
<b>4 weeks</b>	2.57 $\pm$ 0.15/6	1.79 $\pm$ 0.17/5	1.75 $\pm$ 0.18/5
<b>8 weeks</b>	3.24 $\pm$ 0.50/6	2.30 $\pm$ 0.26/6	1.56 $\pm$ 0.15/5

FS, fibrin sealant; MC, mononuclear cells; RZ, rhizotomy.

**Table S5.** Iba1 immunolabeling quantification at lamina IX (integrated density of pixels). The values are presented as mean  $\pm$  standard error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	1.84 $\pm$ 0.13/5	1.43 $\pm$ 0.11/5	1.46 $\pm$ 0.06/5
<b>4 weeks</b>	1.48 $\pm$ 0.07/5	1.63 $\pm$ 0.22/5	1.31 $\pm$ 0.05/5
<b>8 weeks</b>	1.71 $\pm$ 0.23/6	1.42 $\pm$ 0.10/6	1.25 $\pm$ 0.16/5

FS, fibrin sealant; MC, mononuclear cells; RZ, rhizotomy.

**Table S6.** VGLUT1 immunolabeling quantification at lamina III (integrated density of pixels). The values are presented as mean  $\pm$  standard error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	0.25 $\pm$ 0.06/5	0.59 $\pm$ 0.07/5	0.67 $\pm$ 0.11/6
<b>4 weeks</b>	0.43 $\pm$ 0.06/5	0.75 $\pm$ 0.14/5	0.67 $\pm$ 0.11/5
<b>8 weeks</b>	0.42 $\pm$ 0.05/5	0.79 $\pm$ 0.06/6	0.91 $\pm$ 0.07/5

FS, fibrin sealant; MC, mononuclear cells; RZ, rhizotomy.

**Table S7.** VGLUT1 immunolabeling quantification at lamina IX (integrated density of pixels). The values are presented as mean  $\pm$  standard error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	0.09 $\pm$ 0.02/5	0.27 $\pm$ 0.12/5	0.50 $\pm$ 0.08/5
<b>4 weeks</b>	0.09 $\pm$ 0.03/5	0.27 $\pm$ 0.06/5	0.28 $\pm$ 0.10/5
<b>8 weeks</b>	0.05 $\pm$ 0.01/5	0.11 $\pm$ 0.03/6	0.46 $\pm$ 0.13/5

FS, fibrin sealant; MC, mononuclear cells; RZ, rhizotomy.

**Table S8.** GAD65 immunolabeling quantification at lamina III (integrated density of pixels). The values are presented as mean  $\pm$  standard error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	1.09 $\pm$ 0.03/5	0.96 $\pm$ 0.04/5	0.95 $\pm$ 0.04/5
<b>4 weeks</b>	1.17 $\pm$ 0.09/5	1.15 $\pm$ 0.09/5	1.10 $\pm$ 0.05/5
<b>8 weeks</b>	1.24 $\pm$ 0.02/6	1.02 $\pm$ 0.05/5	0.96 $\pm$ 0.07/5

FS, fibrin sealant; MC, mononuclear cells; RZ, rhizotomy.

**Table S9.** Synaptophysin Immunolabeling Quantification At Laminae I and II (Integrated Density of Pixels). The Values Are Presented As Mean  $\pm$  Standard Error.

Survival Time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	0.89 $\pm$ 0.08/5	1.06 $\pm$ 0.05/5	1.16 $\pm$ 0.05/6
<b>4 weeks</b>	1.19 $\pm$ 0.13/6	1.16 $\pm$ 0.10/6	0.99 $\pm$ 0.04/5
<b>8 weeks</b>	1.12 $\pm$ 0.10/5	1.15 $\pm$ 0.15/6	1.16 $\pm$ 0.04/5

FS, fibrin sealant; RZ, rhizotomy; MC, mononuclear cells.

**Table S10.** Synaptophysin Immunolabeling Quantification At Laminae V and VI (Integrated Density of Pixels). The Values Are Presented As Mean  $\pm$  Standard Error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	1.11 $\pm$ 0.06/4	1.13 $\pm$ 0.12/5	0.97 $\pm$ 0.07/5
<b>4 weeks</b>	0.95 $\pm$ 0.08/5	1.07 $\pm$ 0.05/6	1.00 $\pm$ 0.06/5
<b>8 weeks</b>	0.88 $\pm$ 0.11/6	0.97 $\pm$ 0.10/6	0.93 $\pm$ 0.06/5

FS, fibrin sealant; RZ, rhizotomy; MC, mononuclear cells.

**Table S11.** Synaptophysin Quantification At Lamina IX (Integrated Density of Pixels). The Values Are Presented As Mean  $\pm$  Standard Error.

Survival time\Group	RZ/n	RZ+FS/n	RZ+FS+MC/n
<b>1 week</b>	0.85 $\pm$ 0.04/5	0.94 $\pm$ 0.08/5	0.92 $\pm$ 0.05/5
<b>4 weeks</b>	0.84 $\pm$ 0.04/6	0.90 $\pm$ 0.08/6	0.86 $\pm$ 0.11/5
<b>8 weeks</b>	0.75 $\pm$ 0.08/5	0.90 $\pm$ 0.08/5	0.83 $\pm$ 0.05/5

FS, fibrin sealant; RZ, rhizotomy; MC, mononuclear cells.