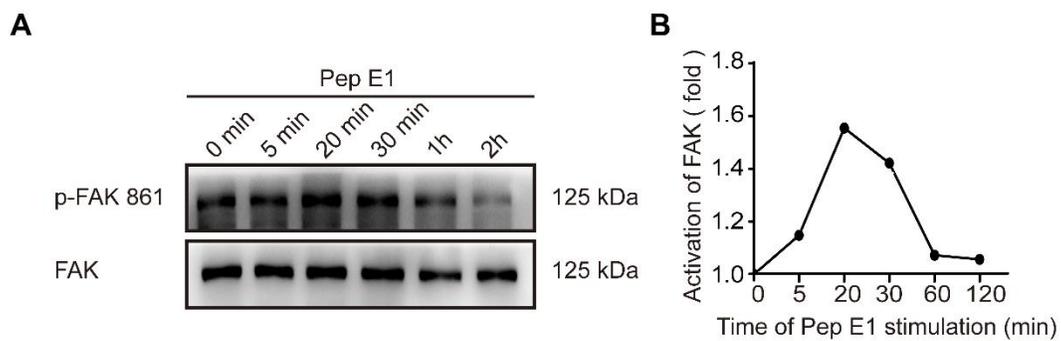
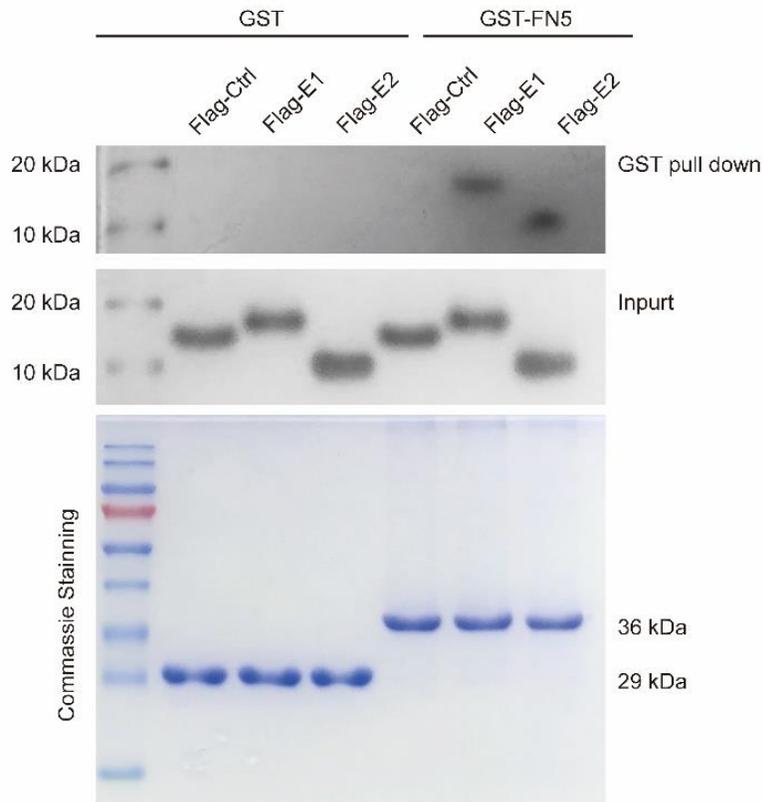


**Figure S1. Pep Ctrl does not activate downstream pathways of Netrin-1.** (A) Cortical neurons were stimulated with gradient concentration of Pep Ctrl. Cell lysates were incubated with the indicated antibodies to detect the phosphorylation of FAK, SFK and ERK. (B) Quantifications of peptide induced FAK PY861 in neurons.  $n = 3$ . (C) Quantifications of peptide induced SFK PY418 in neurons.  $n = 3$ . (D) Quantifications of peptide induced ERK PY202/204 in neurons.  $n = 3$ . Data are presented as the means  $\pm$  SEM. One-way ANOVA was used for all statistical analyses shown in this figure (ns, not significant).

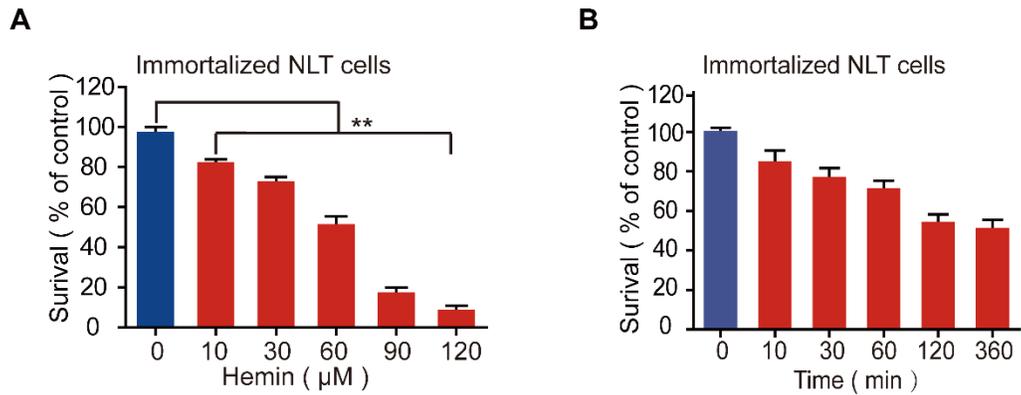


**Figure S2. Pep E1 increased FAK tyrosine phosphorylation in a time-dependent manner.**

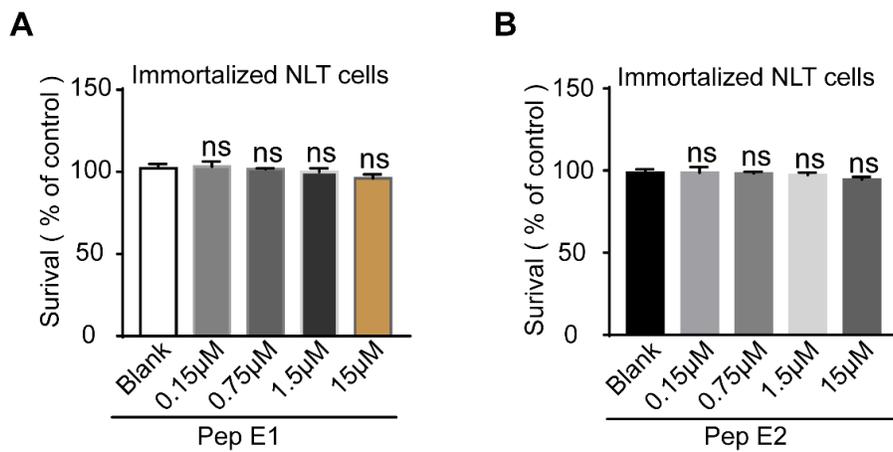
(A) Cortical neurons (DIV3) were stimulated with peptide E1 for the indicated time. Cell lysates were incubated with the specially antibody to detect the phosphorylation of FAK Y861. (B) Quantifications of peptide E1 induced FAK PY861 in neurons were shown in (A). n = 3.



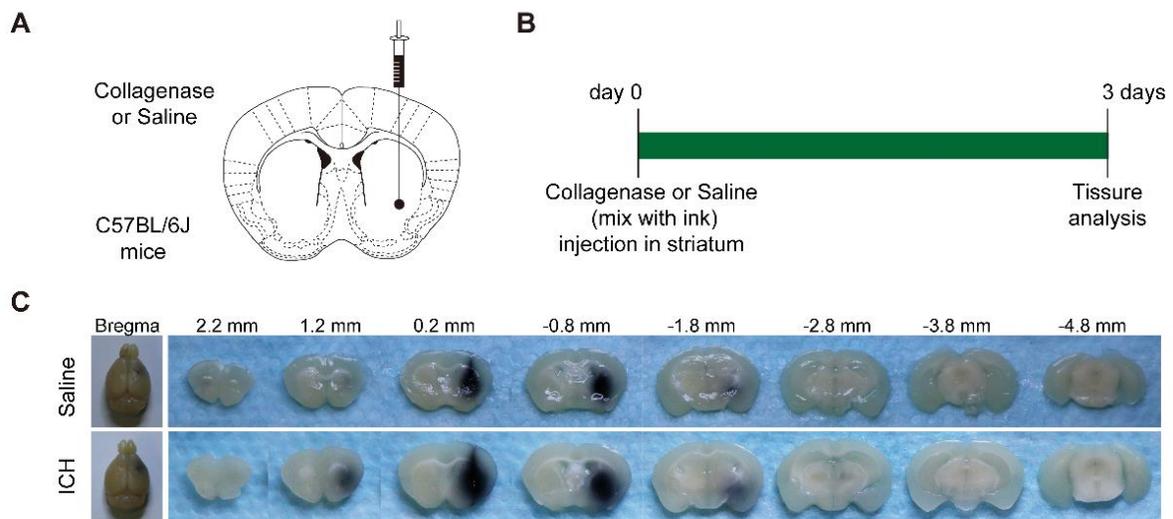
**Figure S3. Pep E1 and E2 direct binding with DCC's FN5 domain.** Synthesized N-terminal added Flag sequence peptides Flag-Ctrl, Flag-E1 and Flag-E2 were incubated with the GST-DCC-FN5 and GST proteins respectively, then evaluated by SDS-PAGE.



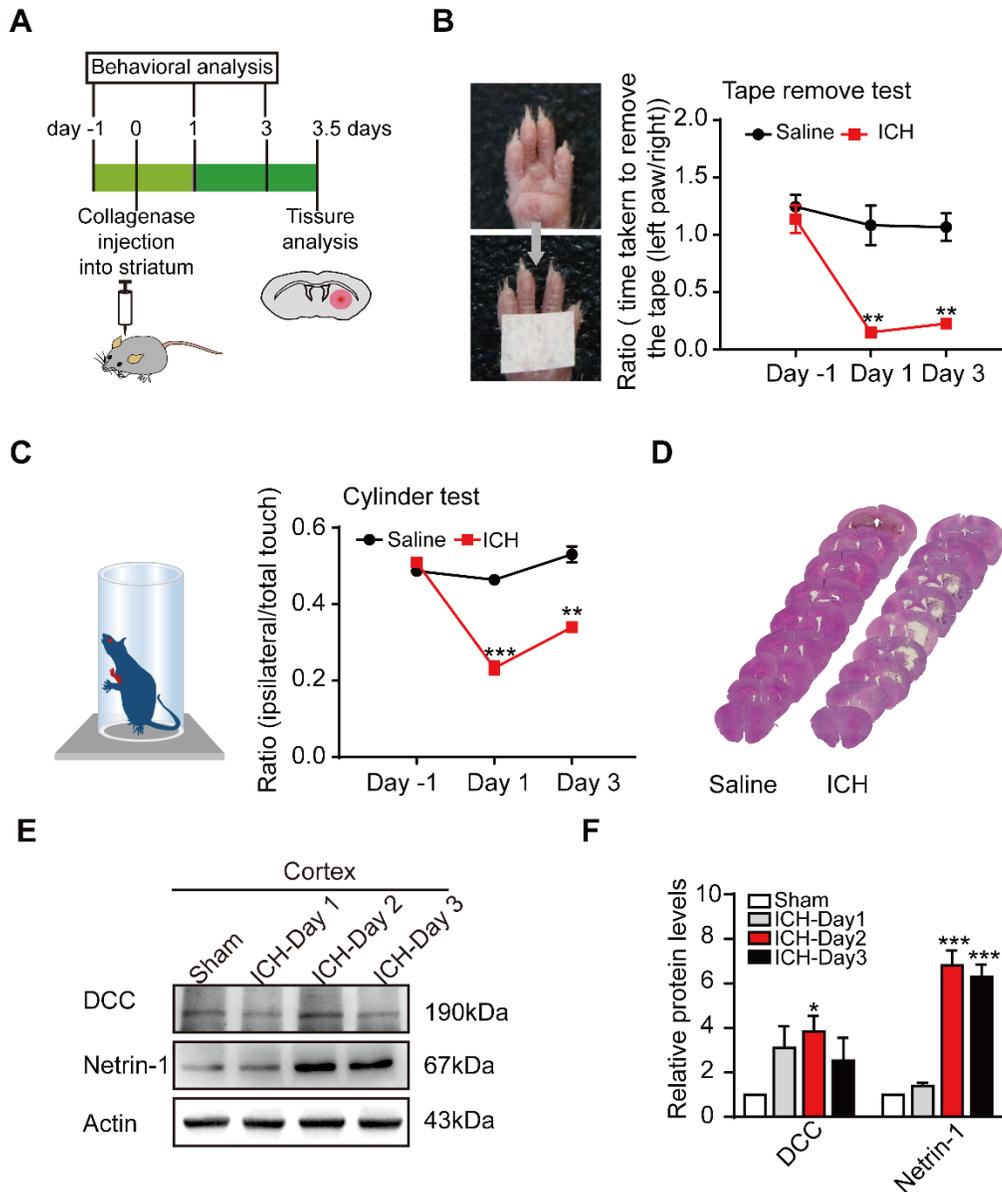
**Figure S4. Hemin induced a dose and time-dependent neurotoxicity in cultured NLT cells.** (A) CCK8 assays showed that hemin induces dose-dependent death of NLT cells.  $n = 4$ . (B) CCK8 assays showed that hemin induces time-dependent death of NLT cells.  $n = 4$ . Data are presented as the means  $\pm$  SEM. One-way ANOVA was used for all statistical analyses shown in this figure (\*\* $p < 0.001$ , ns, not significant).



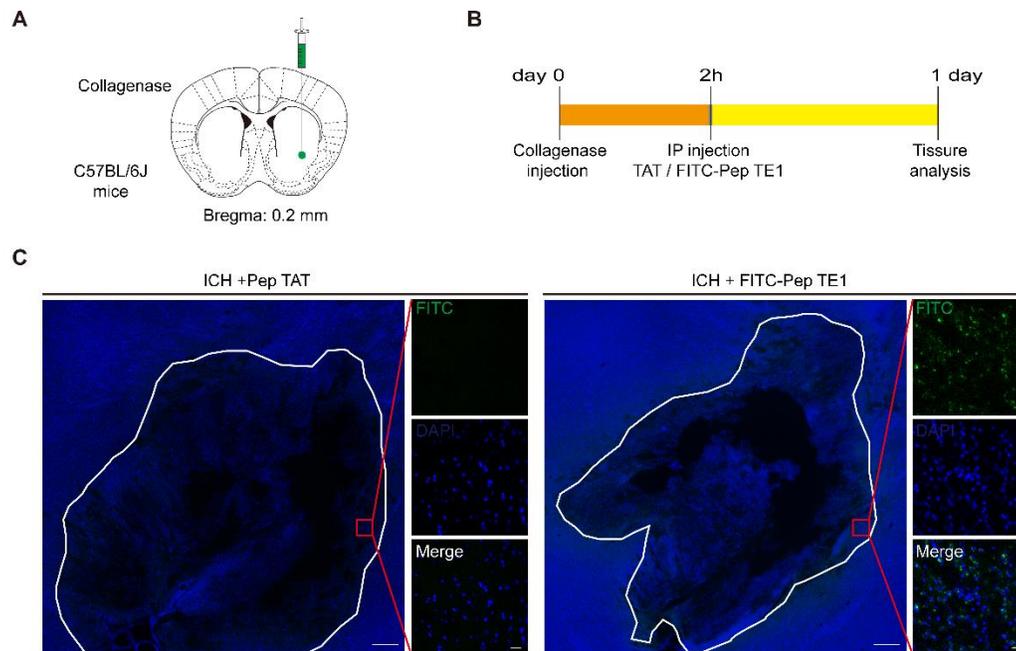
**Figure S5. The peptides don't affect cell viability in NLT cells.** (A) CCK8 assays showed that series dose of Pep E1 has not impact on cell viability.  $n = 4$ . (B) CCK8 assays showed that series dose of Pep E2 does not affect cell viability.  $n = 4$ . Data are presented as the means  $\pm$  SEM. One-way ANOVA was used for all statistical analyses shown in this figure (ns, not significant).



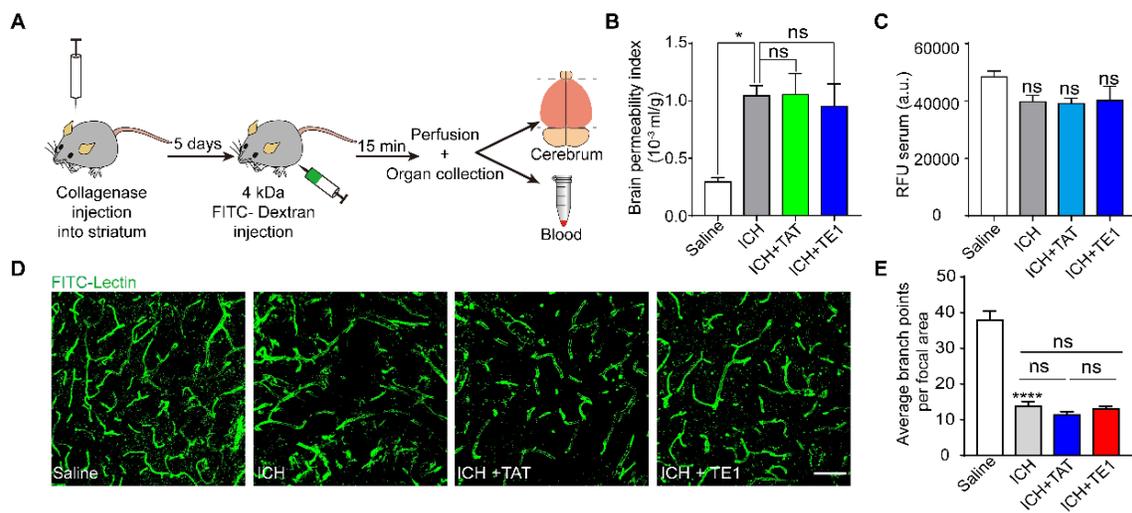
**Figure S6. Collagenase injection volume is measured in mouse model of ICH.** (A) Schematic of strategies used to inject Collagenase and Saline in C57 mice. (B) Experimental timeline. (C) Representative images showing ink area were similar in the Saline and ICH brain.



**Figure S7. The protein levels of Netrin-1 and DCC is increased following experimental ICH.** (A) Schematic of the experimental paradigm of modeling ICH in mice. (B-C) Intracerebral hemorrhage in mice were shown neurological deficit by an adhesive tape remove test (B) and cylinder test (C).  $n = 3$ . (D) Representative HE stained brain sections at 3 days after ICH built. Scale bar, 1 mm. (E) Immunoblot analysis of Netrin-1 and DCC in the ipsilateral cortex at different time points after ICH. (F) Quantitative analysis of the western blot results shown in (E), respectively (\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ; ns, not significant).  $n = 3$ .



**Figure S8. The FITC signal of FITC labeled peptide TE1 was detectable in the hematoma region after ICH.** (A) Schematic of strategies used to inject Collagenase and Saline in C57 mice. (B) Experimental timeline. (C) Representative images detective FITC signals of hematoma region. Scale bars, 200 and 10  $\mu$ m respectively.



**Figure S9. Netrin-1 derived peptide E1 no effected on the disruption of the blood-brain barrier permeability and microvessel after ICH.** (A) Illustrations of in vivo BBB permeability assay using fluorescent tracers in an intracerebral hemorrhage model. (B) Homogenized ipsilateral hemisphere (free of the olfactory lobes, cerebellum and hindbrain) were utilized to obtain dextran permeability by measuring the raw fluorescence units (RFUs) on a microplate reader. Set the gain to optimal and use excitation/emission (nm) values of 490/520 for FITC dye and start the measurement to obtain the RFUs. Permeability Index (mL/g) = (Tissue RFUs/g tissue weight) / (Serum RFUs/mL serum). n = 3. (C) Serum fluorescence values (arbitrary units—a.u.) indicate equivalent tracer absorption between treat with/without TE1 mice. n = 3. (D) Representative confocal microscopy analysis of lectin-positive microvessels (green) in mice treat with/without TE1 at 5 days after ICH. Scale bar, 50  $\mu$ m. (E) Quantitative analyses for the total number of branch points in the focal area between with/without TE1 treatment groups of the perihematomal region. n = 4.

## Supplementary Table 1

Figure	Measure	Value	Comparisons	Analysis	Statistic value	P value
Figure. 2C	protein level	Mock = 0.5027	Mock (n = 3) VS	One-way ANOVA	F (2, 6) = 9.728	Mock vs. NTN1-WT: p = 0.0123
		Netrin-1 = 0.9411	Netrin-1 (n = 3)			Mock vs. NTN1- (Δ407-443): p = 0.0123
		Netrin-1-(Δ407-443) = 0.627	Netrin-1-(Δ407-443) (n = 3)			NTN1-WT vs. NTN1- (Δ407-443) : p= 0.0502
Figure. 2E	protein level	GST = 0.2912	GST (n = 3) VS	One-way ANOVA	F (2, 6) = 47.77	GST vs GST-EGF3: p = 0.022
		GST-EGF3 = 0.6181	GST-EGF3 (n = 3)			GST vs Netrin-1: p = 0.002
		Netrin-1 = 0.8123	Netrin-1 (n = 3)			GST-EGF3 vs Netrin-1: p = 0.0263
Figure. 2F	protein level	GST = 0.6445	GST (n = 3) VS	One-way ANOVA	F (2, 6) = 16.42	GST vs GST-EGF3: p = 0.0249
		GST-EGF3 = 0.8867	GST-EGF3 (n = 3)			GST vs Netrin-1: p = 0.0032
		Netrin-1 = 1.019	Netrin-1 (n = 3)			GST-EGF3 vs Netrin-1: p = 0.1930
Figure. 2G	protein level	GST = 0.3535	GST (n = 3) VS	One-way ANOVA	F (2, 6) = 16.25	GST vs GST-EGF3: p = 0.0269
		GST-EGF3 = 0.7297	GST-EGF3 (n = 3)			GST vs Netrin-1: p = 0.0032
		Netrin-1 = 0.9449	Netrin-1 (n = 3)			GST-EGF3 vs Netrin-1: p = 0.1813
Figure. 3D	protein level	Mock = 0.3546	Mock (n = 3) VS	One-way ANOVA	F (3, 8) = 4.704	Mock vs 0.2 μM: p = 0.9999
		0.2 μM = 0.3569	0.2 μM (n = 3)			Mock vs 1.5 μM: p = 0.0309
		1.5 μM = 0.8771	1.5 μM (n = 3)			Mock vs 12 μM: p = 0.9126
		12 μM = 0.4401	12 μM (n = 3)			
Figure. 3E	protein level	Mock = 0.3793	Mock (n = 3) VS	One-way ANOVA	F (3, 8) = 3.996	Mock vs 0.2 μM: p = 0.9983
		0.2 μM = 0.3584	0.2 μM (n = 3)			Mock vs 1.5 μM: p = 0.0471
		1.5 μM = 0.8537	1.5 μM (n = 3)			Mock vs 12 μM: p = 0.8420
		12 μM = 0.4884	12 μM (n = 3)			
Figure. 3F	protein level	Mock = 0.508	Mock (n = 3) VS	One-way ANOVA	F (3, 8) = 0.0379	Mock vs 0.2 μM: p = 0.9941
		0.2 μM = 0.533	0.2 μM (n = 3)			Mock vs 1.5 μM: p = 0.9942
		1.5 μM = 0.5329	1.5 μM (n = 3)			Mock vs 12 μM: p = 0.9739
		12 μM = 0.5501	12 μM (n = 3)			
Figure. 3G	protein level	Mock = 0.4042	Mock (n = 3) VS	One-way ANOVA	F (3, 8) = 5.096	Mock vs 0.2 μM: p = 0.6529
		0.2 μM = 0.569	0.2 μM (n = 3)			Mock vs 1.5 μM: p = 0.0255
		1.5 μM = 0.9628	1.5 μM (n = 3)			Mock vs 12 μM: p = 0.0437
		12 μM = 0.9009	12 μM (n = 3)			
Figure. 3H	protein level	Mock = 0.426	Mock (n = 3) VS	One-way ANOVA	F (3, 8) = 8.01	Mock vs 0.2 μM: p = 0.7523
		0.2 μM = 0.518	0.2 μM (n = 3)			Mock vs 1.5 μM: p = 0.0104

		1.5 $\mu$ M = 0.8684	1.5 $\mu$ M (n = 3)			Mock vs 12 $\mu$ M: p = 0.0158
		12 $\mu$ M = 0.8353	12 $\mu$ M (n = 3)			
		Mock = 0.3051	Mock (n = 3) VS			Mock vs 0.2 $\mu$ M: p = 0.3252
Figure. 3I	protein level	0.2 $\mu$ M = 0.6627	0.2 $\mu$ M (n = 3)	One-way	F(3, 8) =	Mock vs 1.5 $\mu$ M: p = 0.0190
		1.5 $\mu$ M = 1.105	1.5 $\mu$ M (n = 3)	ANOVA	4.889	Mock vs 12 $\mu$ M: p = 0.0499
		12 $\mu$ M = 0.9556	12 $\mu$ M (n = 3)			
Figure. 3K	protein level	Pep Ctrl = 0.2937	Pep Ctrl (n = 3) VS			Pep ctrl vs Netrin-1: p = 0.0153
		Netrin-1 = 0.9328	Netrin-1 (n = 3)	One-way	F(3, 8) =	Pep ctrl vs Pep E1: p = 0.0303
DCC <sup>+/+</sup>		Pep E1 = 0.8503	Pep E1 (n = 3)	ANOVA	5.586	Pep ctrl vs Pep E1: p = 0.0463
		Pep E2 = 0.8005	Pep E2 (n = 3)			
Figure. 3K	protein level	Pep Ctrl = 0.2927	Pep Ctrl (n = 3) VS			Pep ctrl vs Netrin-1: p = 0.6786
		Netrin-1 = 0.5313	Netrin-1 (n = 3)	One-way	F(3, 8) =	Pep ctrl vs Pep E1: p = 0.7825
DCC <sup>-/-</sup>		Pep E1 = 0.4887	Pep E1 (n = 3)	ANOVA	0.3429	Pep ctrl vs Pep E1: p = 0.8434
		Pep E2 = 0.4615	Pep E2 (n = 3)			
Figure. 4B	protein level	Sham = 1	Sham (n = 3) VS			Sham vs Hemin-2h: p = 0.7397
		Hemin-2h = 1.963	Hemin-2h (n = 3)	One-way	F(4, 10) =	Sham vs Hemin-6h: p = 0.0008
DCC		Hemin-6h = 6.563	Hemin-6h (n = 3)	ANOVA	12.79	Sham vs Hemin-12h: p = 0.0028
		Hemin-12h = 5.703	Hemin-12h (n = 3)			Sham vs Hemin-24 h: p = 0.7842
		Hemin-24h = 1.891	Hemin-24h (n = 3)			
Figure. 4B	protein level	Sham = 1	Sham (n = 3) VS			Sham vs Hemin-2h: p = 0.9230
		Hemin-2h = 1.976	Hemin-2h (n = 3)	One-way	F(4, 10) =	Sham vs Hemin-6h: p = 0.0419
Netrin-1		Hemin-6h = 5.731	Hemin-6h (n = 3)	ANOVA	2.873	Sham vs Hemin-12h: p = 0.1581
		Hemin-12h = 4.426	Hemin-12h (n = 3)			Sham vs Hemin-24 h: p = 0.3418
		Hemin-24h = 3.597	Hemin-24h (n = 3)			
Figure. 4C	Survival (% of control)	Blank = 97.49	Blank (n = 4) VS			Blank vs Pep Ctrl: p > 0.9999
		Pep Ctrl = 97.64	Pep Ctrl (n = 4)	One-way	F(3, 12) =	Blank vs Pep E1: p = 0.9110
		Pep E1 = 99.92	Pep E1 (n = 4)	ANOVA	0.2046	Blank vs Pep E2: p > 0.9999
		Pep E2 = 97.54	Pep E2 (n = 4)			
Figure. 4D	Survival (% of control)		Hemin+Pep Ctrl (n =4) VS		F(9, 48) = 1.728	P=0.1083
			Hemin+Netrin-1 (n =4)	Two-way ANOVA	F(3, 48) = 2.143	P=0.1071
			Hemin+Pep E1 (n =4)		F(3, 48) = 10.77	P<0.0001
			Hemin+Pep E2 (n =4)			
Figure. 4F	% of Cell viability	Blank = 97.15	Blank (n = 9)			Hemin vs blank: p = 0.0001

		Hemin = 56.35	Hemin (n = 9) VS			Hemin vs Hemin+Netrin-1: p = 0.036
		Hemin+Netrin-1 = 57.81	Hemin+Netrin-1 (n = 9)	One-way ANOVA	F(5, 48) = 24.98	Hemin vs Hemin+Ctrl: p = 0.3227
		Hemin+ Ctrl = 57.81	Hemin+Ctrl (n = 9)			Hemin vs Hemin+E1: p = 0.030
		Hemin+ E1 = 72.91	Hemin+E1 (n = 9)			Hemin vs Hemin+E2: p = 0.9997
		Hemin+E2 = 55.49	Hemin+E2 (n = 9)			
		Blank = 2.855	Blank (n = 9)			Hemin vs blank: p = 0.0001
		Hemin = 43.85	Hemin (n = 9)			Hemin vs Hemin+Netrin-1: p = 0.043
Figure. 4G	% of Dead cells	Hemin+Netrin-1 = 27.37	Hemin+Netrin-1 (n = 9)	One-way ANOVA	F(5, 48) = 23.34	Hemin vs Hemin+Ctrl: p = 0.9961
		Hemin+ Ctrl = 42.19	Hemin+Ctrl (n = 9)			Hemin vs Hemin+E1: p = 0.036
		Hemin+ E1 = 27.09	Hemin+E1 (n = 9)			Hemin vs Hemin+E2: p = 0.9999
		Hemin+E2 = 43.92	Hemin+E2 (n = 9)			
		Blank = 95	Blank (n = 8)			Hemin vs blank: p = 0.0001
		Hemin = 52.5	Hemin (n = 8) VS			Hemin vs Hemin+0.15 $\mu$ M: p = 0.048
		Hemin+0.15 $\mu$ M = 63.01	Hemin+0.15 $\mu$ M (n = 8)	One-way ANOVA	F(4, 35) = 16.02	Hemin vs Hemin+ 5 $\mu$ M: p = 0.4669
Figure. 4H	Survival (% of control)	Hemin+ 5 $\mu$ M = 60.69	Hemin+ 5 $\mu$ M (n = 8)			Hemin vs Hemin+ 10 $\mu$ M: p = 0.9395
		Hemin+ 10 $\mu$ M = 56	Hemin+ 10 $\mu$ M (n = 8)			
		Saline = 101.8	Saline (n = 6) VS			Sham vs ICH: p = 0.008
		ICH = 92.19	ICH (n = 6)	One-way ANOVA	F(3, 20) = 11.78	Sham vs ICH+TAT: p = 0.001
Figure. 5C	Weight chang (% of control)	ICH+TAT = 90.4	ICH+TAT (n = 6)			Sham vs. ICH+TE1: p = 0.3297
		ICH+TE1 = 98.48	ICH+te1 (n = 6)			
			Saline (n = 10)		F (9, 106) = 6.354	P<0.0001
			ICH (n = 6) VS	Two-way ANOVA	F (3, 106) = 38.08	P<0.0001
Figure. 5E	Remove tape ratio		ICH+TAT (n = 6)		F (3, 106) = 45.53	P<0.0001
			ICH+te1 (n = 8)			
			Saline (n = 10)		F (9, 92) = 44.09	P<0.0001
Figure. 5F	Touch ratio		ICH (n = 6) VS	Two-way ANOVA	F (3, 92) = 263.3	P<0.0001

			ICH+TAT (n = 6)		F (3, 92) = 260.9	P<0.0001
			ICH+te1 (n = 8)			
Figure. 5H	Hemorrhage volume	Saline = 0.012	Saline (n = 10) VS			saline vs ICH: p < 0.0001
		ICH = 7.605	ICH (n = 6)			saline vs ICH+TAT p < 0.0001
		ICH+TAT = 7.6375	ICH+TAT (n = 6)	One-way	F(3, 49) =	saline vs ICH+TE1: p < 0.0001
		ICH+TE1 = 4.3875	ICH+te1 (n = 8)	ANOVA	32.78	ICH vs ICH+TAT: p > 0.9999 ICH vs ICH+TE1: p = 0.0031 ICH+TAT vs ICH+TE1: p = 0.0085
Figure. 6B	Cell number	Saline = 3.083	Saline (n =4) VS			saline vs ICH: p < 0.0001
		ICH = 78.38	ICH (n = 4)			saline vs ICH+TAT p < 0.0001
		ICH+TAT = 77.49	ICH+TAT (n = 4)	One-way	F(3, 158) =	saline vs ICH+TE1: p = 0.0023
		ICH+TE1 = 30.02	ICH+te1 (n = 4)	ANOVA	54.53	ICH vs ICH+TAT: p = 0.9989 ICH vs ICH+TE1: p = 0.0041 ICH+TAT vs ICH+TE1: p = 0.0032
Figure. 6D	Cell number	Saline = 11.53	Saline (n =4) VS			saline vs ICH: p < 0.0001
		ICH = 52.22	ICH (n = 4)			saline vs ICH+TAT p < 0.0001
		ICH+TAT = 54.22	ICH+TAT (n = 4)	One-way	F(3, 99) =	saline vs ICH: p < 0.0001
		ICH+TE1 = 42.86	ICH+te1 (n = 4)	ANOVA	36.52	ICH vs ICH+TAT: p = 0.9410 ICH vs ICH+TE1: p = 0.0328 ICH+TAT vs ICH+TE1: p = 0.0132
Figure. 6F	Cell number	Saline = 7.585	Saline (n =4) VS			saline vs ICH: p = 0.6329
		ICH = 9.731	ICH (n = 4)			saline vs ICH+TAT p = 0.2465
		ICH+TAT = 11.1	ICH+TAT (n = 4)	One-way	F(3, 84) =	saline vs ICH: p = 0.8343
		ICH+TE1 = 9.458	ICH+te1 (n = 4)	ANOVA	1.2	ICH vs ICH+TAT: p = 0.7667 ICH vs ICH+TE1: p = 0.9989 ICH+TAT vs ICH+TE1: p = 0.8288
Figure. S1B	protein level	Mock = 0.2218	Mock (n = 3) VS			Mock vs 0.2 μM: p = 0.9937
		0.2 μM = 0.2363	0.2 μM (n = 3)	One-way	F (3, 8) =	Mock vs 1.5 μM: p = 0.9991
		1.5 μM = 0.2143	1.5 μM (n = 3)	ANOVA	0.03619	Mock vs 12 μM: p = 0.9999
		12 μM = 0.218	12 μM (n = 3)			
Figure. S1C	protein level	Mock = 0.5585	Mock (n = 3) VS			Mock vs 0.2 μM: p = 0.9050
		0.2 μM = 0.5885	0.2 μM (n = 3)	One-way	F (3, 8) =	Mock vs 1.5 μM: p = 0.9827
		1.5 μM = 0.5425	1.5 μM (n = 3)	ANOVA	0.3093	Mock vs 12 μM: p = 0.9817

		12 $\mu$ M = 0.5422	12 $\mu$ M (n = 3)			
		Mock = 0.5463	Mock (n = 3) VS			Mock vs 0.2 $\mu$ M: p = 0.9845
Figure. S1D	protein level	0.2 $\mu$ M = 0.507	0.2 $\mu$ M (n = 3)	One-way	F (3, 8) =	Mock vs 1.5 $\mu$ M: p = 0.9999
		1.5 $\mu$ M = 0.552	1.5 $\mu$ M (n = 3)	ANOVA	0.0974	Mock vs 12 $\mu$ M: p = 0.9871
		12 $\mu$ M = 0.5833	12 $\mu$ M (n = 3)			
		0 $\mu$ M = 98.2	0 $\mu$ M (n = 4) VS			0 $\mu$ M vs 10 $\mu$ M hemin: p < 0.0001
		10 $\mu$ M = 83.01	10 $\mu$ M (n = 4)			0 $\mu$ M vs 30 $\mu$ M hemin: p < 0.0001
		30 $\mu$ M = 73.67	30 $\mu$ M (n = 4)	One-way	F (5, 18) =	0 $\mu$ M vs 60 $\mu$ M hemin: p < 0.0001
Figure. S4A	Survival (% of control)	60 $\mu$ M = 52.23	60 $\mu$ M (n = 4)	ANOVA	369.1	0 $\mu$ M vs 90 $\mu$ M hemin: p < 0.0001
		90 $\mu$ M = 18.32	90 $\mu$ M (n = 4)			0 $\mu$ M vs 120 $\mu$ M hemin: p < 0.0001
		120 $\mu$ M = 9.669	120 $\mu$ M (n = 4)			10 $\mu$ M hemin vs 120 $\mu$ M hemin: p = 0.0040
		0 min = 101.2	0 min (n = 4) VS			blank vs 10min: p = 0.0159
		10 min = 85.78	10 min (n = 4)			blank vs 30min: p = 0.0004
		30 min = 77.93	30 min (n = 4)	One-way	F (5, 18) =	blank vs 60min: p = 0.0001
Figure. S4B	Survival (% of control)	60 min = 72.35	60 min (n = 4)	ANOVA	31.71	blank vs 120min: p = 0.0001
		120 min = 55.38	120 min (n = 4)			blank vs 360min: p = 0.0001
		360 min = 52.23	360 min (n = 4)			
		Blank = 102.2	Blank (n = 4) VS			Blank vs 0.15 $\mu$ M: p = 0.9928
		0.15 $\mu$ M = 103.2	0.15 $\mu$ M (n = 4)	One-way	F (4, 15) =	Blank vs 0.75 $\mu$ M: p = 0.9992
Figure. S5A	Survival (% of control)	0.75 $\mu$ M = 101.6	0.75 $\mu$ M (n = 4)	ANOVA	1.438	Blank vs 1.5 $\mu$ M: p = 0.8963
		1.5 $\mu$ M = 99.92	1.5 $\mu$ M (n = 4)			Blank vs 12 $\mu$ M: p = 0.2382
		15 $\mu$ M = 96.1	15 $\mu$ M (n = 4)			
		Blank = 98.63	Blank (n = 4) VS			Blank vs 0.15 $\mu$ M: p = 0.9999
		0.15 $\mu$ M = 98.7	0.15 $\mu$ M (n = 4)	One-way	F (4, 15) =	Blank vs 0.75 $\mu$ M: p = 0.9974
Figure. S5B	Survival (% of control)	0.75 $\mu$ M = 98.27	0.75 $\mu$ M (n = 4)	ANOVA	1.438	Blank vs 1.5 $\mu$ M: p = 0.7885
		1.5 $\mu$ M = 97.29	1.5 $\mu$ M (n = 4)			Blank vs 12 $\mu$ M: p = 0.0559
		15 $\mu$ M = 94.58	15 $\mu$ M (n = 4)			
			Saline (n = 3) VS		F (2, 12) =	P=0.0114
				Two-way	6.64	
Figure. S7B	Remove tape ratio		ICH (n = 3)	ANOVA	F (2, 12) =	P=0.0014
					11.97	
					F (1, 12) =	
					19.4	P=0.0009
Figure. S7C	Touch ratio		Saline (n = 3) VS	Two-way	F (2, 12) =	
				ANOVA	57.08	P<0.0001

			ICH (n = 3)		F (2, 12) = 69.26	P<0.0001	
					F (1, 12) = 162.8	P<0.0001	
Figure. S7E	DCC	protein level	Sham = 1	Sham (n = 3) VS		Sham vs ICH-Day 1: p = 0.0993	
			ICH-Day 1 = 3.449	ICH-Day 1 (n = 3)	One-way	F(3, 8) =	Sham vs. ICH-Day 2: p = 0.0378
			ICH-Day 2 = 4.11	ICH-Day 2 (n = 3)	ANOVA	3.539	Sham vs. ICH-Day 3: p = 0.3587
			ICH-Day 3 = 2.529	ICH-Day 3 (n = 3)			
Figure. S7F	Netrin-1	protein level	Sham = 1	Sham (n = 3) VS		Sham vs ICH-Day 1: p = 0.8590	
			ICH-Day 1 = 1.4	ICH-Day 1 (n = 3)	One-way	F(3, 8) =	Sham vs. ICH-Day 2: p = 0.0002
			ICH-Day 2 = 5.821	ICH-Day 2 (n = 3)	ANOVA	32.7	Sham vs. ICH-Day 3: p = 0.0004
			ICH-Day 3 = 5.293	ICH-Day 3 (n = 3)			
Figure. S9B	Permeability index		Saline = 0.2922	Saline (n=4) VS		saline vs ICH: p = 0.0193	
			ICH = 1.044	ICH (n = 3)			saline vs ICH+TAT p = 0.0176
			ICH+TAT = 1.056	ICH+TAT (n = 3)	One-way	F(3, 10) =	saline vs ICH+TE1: p = 0.0261
			ICH+TE1 = 0.9519	ICH+te1 (n = 4)	ANOVA	6.9	ICH vs ICH+TAT: p > 0.9999
							ICH vs ICH+TE1: p = 0.9685
						ICH+TAT vs ICH+TE1: p = 0.9554	
Figure. S9C	RFU serum		Saline = 48444	Saline (n=4) VS		saline vs ICH: p = 0.3178	
			ICH = 39655	ICH (n = 3)			saline vs ICH+TAT p = 0.2725
			ICH+TAT = 39101	ICH+TAT (n = 3)	One-way	F(3, 10) =	saline vs ICH+TE1: p = 0.3055
			ICH+TE1 = 40174	ICH+te1 (n = 4)	ANOVA	1.848	ICH vs ICH+TAT: p = 0.9995
							ICH vs ICH+TE1: p = 0.9995
						ICH+TAT vs ICH+TE1: p = 0.9958	
Figure. S9E	Branch points		Saline = 37.8	Saline (n=4) VS		saline vs ICH: p < 0.0001	
			ICH = 13.75	ICH (n = 4)			saline vs ICH+TAT p < 0.0001
			ICH+TAT = 11.3	ICH+TAT (n = 4)	One-way	F(3, 10) =	saline vs ICH+TE1: p < 0.0001
			ICH+TE1 = 13	ICH+te1 (n = 4)	ANOVA	1.848	ICH vs ICH+TAT: p = 0.4987
							ICH vs ICH+TE1: p = 0.9769
						ICH+TAT vs ICH+TE1: p = 0.7635	

## Supplementary Table 2

Netrin-1 ( $\Delta 407-443$ ) :

ATGATGCGCGCAGTGTGGGAGGCGCTGGCGGGCGCTGGCGGGCGGTGGCGTGCCTGG  
TGGGCGCGGTGCGCGGGCGGGCCCGGGCTCAGCATGTTTCGCGGGCCAGGCGGGCGCA  
GCCCCGATCCCTGCTCGGACGAGAACGGCCACCCGCGCCGCTGCATCCCCGACTTTG  
TCAATGCGGCCTTCGGCAAGGACGTGCGCGTGTCCAGCACCTGCGGGCCGGCCCC  
GGCGCGCTACTGCGTGGTGAGCGAGCGCGGGCAGGAGCGGCTGCGCTCGTGCCAC  
CTCTGCAACGCGTCCGACCCCAAGAAGGCGCACCCGCCCCGCTTCCTCACCGACCT  
CAACAACCCGCACAACCTGACGTGCTGGCAGTCCGAGAACTACCTGCAGTTCCCG  
CACAACGTACGCTCACACTGTCCCTCGGCAAGAAGTTCGAAGTGACCTACGTGA  
GCCTGCAGTTCTGCTCGCCGCGGCCCGAGTCCATGGCCATCTACAAGTCCATGGAC  
TACGGGCGCACGTGGGTGCCCTTCCAGTTCTACTCCACGCAGTGCCGCAAGATGTA  
CAACCGGCCGCACCGCGCGCCCATCACCAAGCAGAACGAGCAGGAGGCCGTGTG  
CACCGACTCGCACACCGACATGCGCCCGCTCTCGGGCGGCCTCATCGCCTTCAGCA  
CGCTGGACGGGCGGCCCTCGGCGCACGACTTCGACAACCTCGCCCGTGTGCAGGA  
CTGGGTACGGCCACAGACATCCGCGTGGCCTTCAGCCGCTGCACACGTTCGGCG  
ACGAGAACGAGGACGACTCGGAGCTGGCGCGGACTCGTACTTCTACGCGGTGTC  
CGACCTGCAGGTGGGCGGCCGCTGCAAGTGCAACGGCCACGCGGCCCGCTGCGTG  
CGCGACCGCGACGACAGCCTGGTGTGCGACTGCAGGCACAACACGGCCGGCCCCGG  
AGTGCGACCGCTGCAAGCCCTTCCACTACGACCGGCCCTGGCAGCGCGCCACAGC  
CCGCGAAGCCAACGAGTGCGTGGCCTGTAAGTCAACCTGCATGCCCGGCGCTGC  
CGCTTCAACATGGAGCTCTACAAGCTTTCGGGGCGCAAGAGCGGAGGTGTCTGCCT  
CAACTGTCGCCACAACACCGCCGGCCGCGCCACTGCCATTACTGCAAGGAGGGCTAC  
TACCGCGACATGGGCAAGCCATCACCCACCGGAAGGCCTGCAAAGCCTGTGATT  
GCAGCCGCTCTCCCATCGCCCCCTGCATAAAGATCCCTGTAGCGCCGCGGACGACT  
GCAGCCAGCAGCGTGGAGGAGCCTGAAGACTGCGATTCTACTGCAAGGCCTCCA  
AGGGGAAGCTGAAGATTAACATGAAAAAGTACTGCAAGAAGGACTATGCCGTCC  
AGATCCACATCCTGAAGGCGGACAAGGCGGGGACTGGTGGAAGTTCACGGTGAA  
CATCATCTCCGTGTATAAGCAGGGCACGAGCCGCATCCGCCGCGGTGACCAGAGC  
CTGTGGATCCGCTCGCGGGACATCGCCTGCAAGTGTCCAAAATCAAGCCCCTCAA  
GAAGTACCTGCTGCTGGGCAACGCGGAGGACTCTCCGGACCAGAGCGGCATCGTG  
GCCGATAAAAGCAGCCTGGTGATCCAGTGGCGGGACACGTGGGCGCGGGCGGCTGC  
GCAAGTCCAGCAGCGTGAGAAGAAGGGCAAGTGCAAGAAGGCCTAG