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Table S1 The changes of MN-08 on body weight in rats before and after SAH

	Sample size	Number of deaths	Included for analysis	Body weight (kg)				
				Day 0	Day 1	Day 3	Day 5	Day 8
Sham	7	0	7	330.7±9.7	333.4±14.1	349.6±9.3	357.2±11.5	378.3±13.3
Model	10	3	7	327.3±15.8	297.4±18.3	306.5±14.8	317.5±13.8	330.2±16.7
MN-08 (3 mg·kg⁻¹)	10	1	8	339.7±14.4	305.6±20.1	312.7±17.5	323.7±22.1	335.8±17.9
MN-08 (6 mg·kg⁻¹)	10	3	7	333.4±13.2	301.9±17.6	309.7±21.5	321.4±24.3	324.8±25.1
MN-08 (12 mg·kg⁻¹)	10	2	8	329.3±20.3	296.7±20.1	307.3±24.5	315.9±23.7	331.9±21.6
Memantine (10 mg·kg⁻¹)	10	3	7	334.3±16.4	301.8±18.6	309.4±22.3	320.3±20.4	333.6±21.4
Nimodipine (0.1 mg·kg⁻¹)	10	3	7	321.5±23.4	295.3±19.4	303.6±19.6	315.9±22.4	330.5±24.8

3 All values are expressed as the mean ± SD ($n = 7$ for sham group, model group, MN-08 (6 mg·kg⁻¹) group, memantine group and nimodipine group; $n = 8$ for
4 MN-08 (3 mg·kg⁻¹) and MN-08 (12 mg·kg⁻¹) group).

Table S2 Physiological parameters in rats before and after SAH

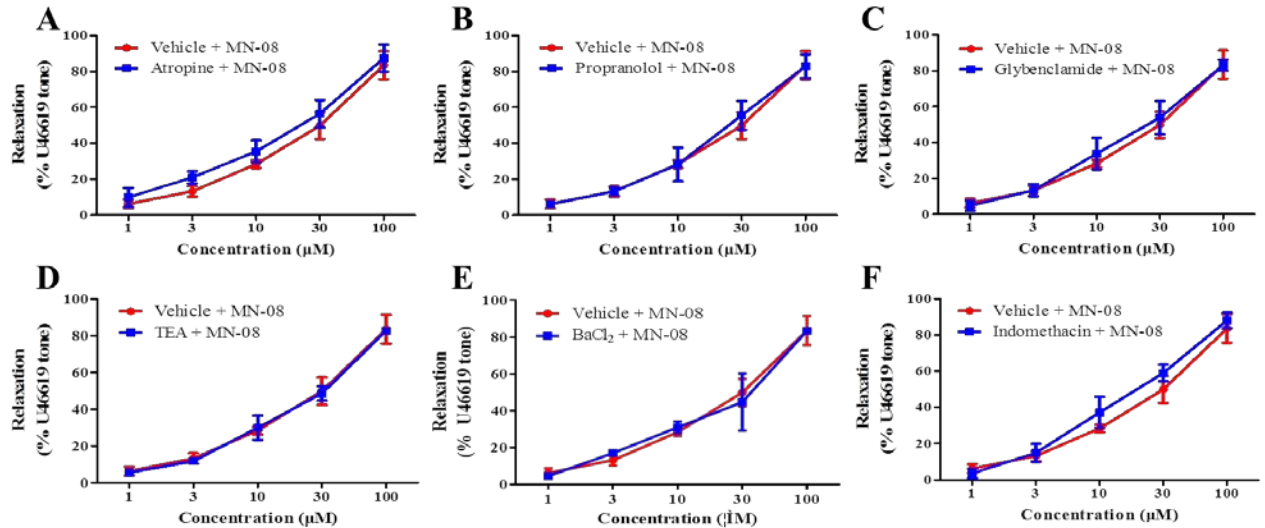
	pH		P _{CO2} (mm Hg)		P _{O2} (mm Hg)		Blood glucose (mmol/L)	
	Before SAH surgery	After SAH surgery	Before SAH surgery	After SAH surgery	Before SAH surgery	After SAH surgery	Before SAH surgery	After SAH surgery
Sham	7.42±0.04	7.43±0.05	37.02±2.54	34.52±4.84	59.80±4.32	56.40±5.03	5.53±1.27	5.83±0.74
Model	7.41±0.02	7.43±0.04	39.20±3.03	40.54±6.11	62.00±4.08	57.09±5.94	5.37±0.06	6.48±0.89
MN-08 (3 mg·kg⁻¹)	7.42±0.06	7.41±0.06	36.60±4.63	36.64±3.91	62.40±8.20	52.00±7.05	6.06±1.50	5.54±1.21
MN-08 (6 mg·kg⁻¹)	7.39±0.04	7.44±0.04	35.70±1.89	43.20±2.63	55.40±4.32	57.60±7.03	6.12±1.08	6.08±0.56
MN-08 (12 mg·kg⁻¹)	7.42±0.03	7.43±0.01	37.80±6.03	35.49±2.01	58.25±6.40	61.20±4.97	5.71±0.57	5.86±1.76
Memantine (10 mg·kg⁻¹)	7.44±0.07	7.45±0.02	38.54±3.48	39.88±6.92	58.20±4.97	61.17±3.28	6.11±1.02	6.12±0.85
Nimodipine (0.1 mg·kg⁻¹)	7.45±0.00	7.37±0.07	39.22±4.84	39.00±2.96	61.17±3.92	59.67±3.72	6.75±1.45	6.48±0.89

6 All values are expressed as the mean ± SD ($n = 7$ for sham group, model group, MN-08 (6 mg·kg⁻¹) group, memantine group and nimodipine group; $n = 8$ for
7 MN-08 (3 mg·kg⁻¹) and MN-08 (12 mg·kg⁻¹) group).

Table S3 Physiological parameters in rabbits SAH

	Sample size	Number of deaths	Included for analysis	Body weight (kg)		Body temperature (°C)		Blood glucose (mmol/L)	
				Day 0	Day 4	Pre-surgery	Post-surgery	Pre-surgery	Post-surgery
Sham	6	0	6	2.40±0.12	2.51±0.13	38.6±0.8	38.8±0.7	7.1±0.2	7.0±0.4
Model	7	1	6	2.32±0.11	2.21±0.15	38.6±0.6	38.8±0.5	7.1±0.4	6.9±0.4
MN-08 (6 mg·kg⁻¹)	7	1	6	2.39±0.14	2.28±0.14	38.8±0.2	38.6±0.5	7.4±0.4	7.6±0.5
Memantine (5 mg·kg⁻¹)	7	1	6	2.38±0.13	2.27±0.14	38.6±0.5	38.8±0.3	7.1±0.3	7.0±0.3
Nimodipine (0.05 mg·kg⁻¹)	7	2	5	2.37±0.12	2.35±0.18	38.7±0.3	38.6±0.6	7.3±0.5	7.5±0.4

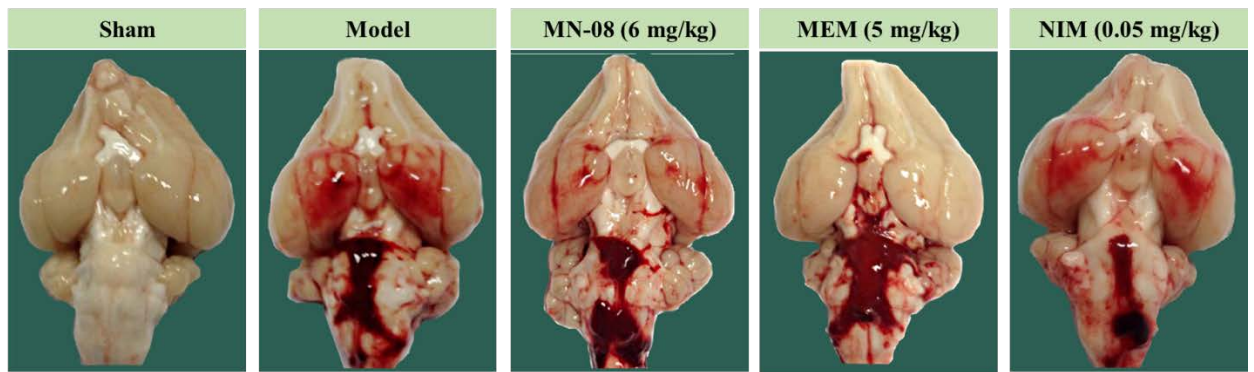
9 All values are expressed as the mean ± SD ($n = 6$ for sham, model, MN-08, memantine groups and $n = 5$ for nimodipine group).



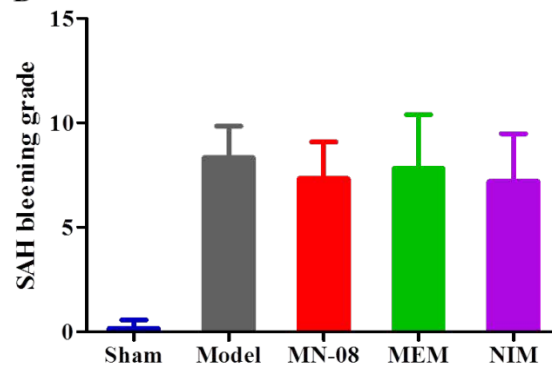
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11 **Supplementary Fig. S1. The effect of inhibitors on MN-08-induced vasodilatation.** The
 12 MCA rings were pre-incubated for 20 min with (A) atropine (an inhibitor of mAChRs, 100
 13 nM), (B) propranolol (an inhibitor of beta-adrenergic receptor, 1 μ M), (C) glybenclamide (an
 14 inhibitor of ATP-sensitive K⁺ channels, 10 μ M), (D) tetraethylammonium (TEA, a
 15 nonselective blocker of K⁺ channels, 100 mM), (E) BaCl₂ (an inhibitor of inward rectifier
 16 K⁺ channel, 10 μ M) or (F) indomethacin (an inhibitor of cyclooxygenase enzymes, 10 μ M)
 17 before pre-contraction by U46619. MN-08 (1-100 μ M) was then added cumulatively. Data
 18 are expressed as mean \pm SD from three independent experiments with 2~3 replicates in each
 19 experiment. Unpaired Student's t test was used to compare the results.

A



B



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21 **Supplementary Fig. S2. The bleeding grades after SAH in a rabbit model.** Rabbits were
22 treated with MN-08 ($6 \text{ mg} \cdot \text{kg}^{-1}$), memantine ($5 \text{ mg} \cdot \text{kg}^{-1}$), nimodipine ($0.05 \text{ mg} \cdot \text{kg}^{-1}$) or
23 vehicle control (saline) via intravenous injection for 3 days. (A) Representative images of
24 blood clots in basal cisterns. (B) Bleeding grade of each group. Data were expressed as mean
25 \pm SEM ($n = 6$ for sham group, model group, MN-08 group and memantine group; $n = 5$ for
26 nimodipine group). Non-parametric Kruskal-Wallis test followed by Dunn's multiple
27 comparisons were used to compare the results.