

Figure S1. TLR9 overexpression cell lines verification. **A.** Morphology observation of BV2, RAW264.7 and HT22 cell lines with NC or OE lentivirus transfection. Scale bar=50 μ m. **B.** Western blot for Flag expression level of all three cell lines with different lentivirus. **c.** qPCR for relative TLR9 mRNA level of all three cell lines with different lentivirus. n=8 for each group. Values are mean \pm SD. *** P <0.001 vs LV-NC group by student t test.

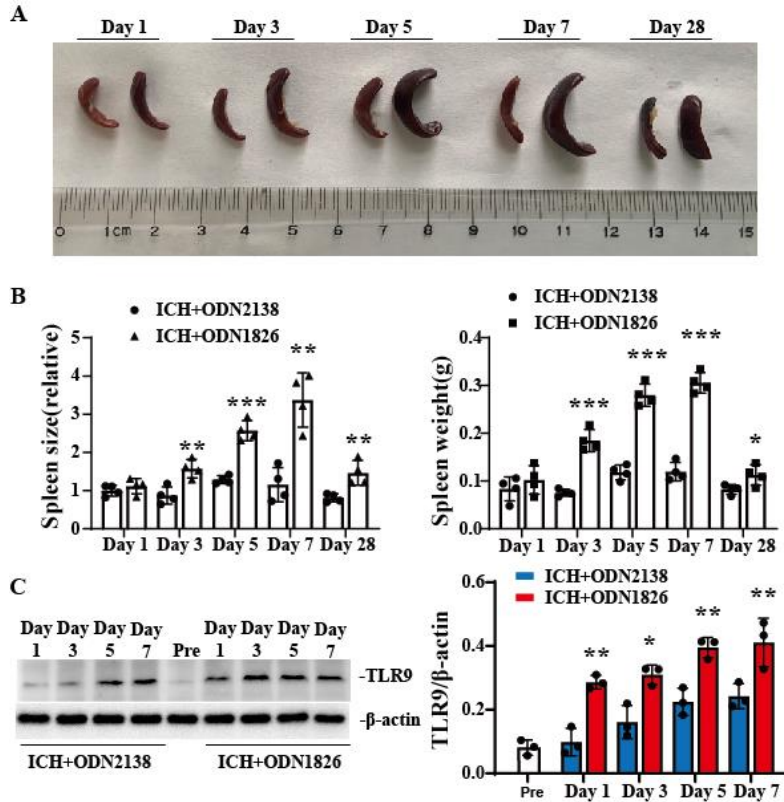


Figure S2. TLR9 activation of pharmacological intervention. **A.** Measurement of spleen size of male mice at day 1, day 3, day 5, day 7 and day 28 after ICH with ODN2138 or ODN1826 treatment. **B.** Spleen size and weight quantification of male mice at day 1, day 3, day 5, day 7 and day 28 after ICH with ODN2138 or ODN1826 treatment. $n=8$ for each group. **C.** Western blot for TLR9 expression in ipsilateral BG of mice received ODN2138 or ODN1826 treatment at day 1, day 3, day 5 and day 7 after ICH. $n=3$ for each group. Values are mean \pm SD. * $P<0.05$, ** $P<0.01$, *** $P<0.001$ vs ICH+ODN2138 group by two-way ANOVA.

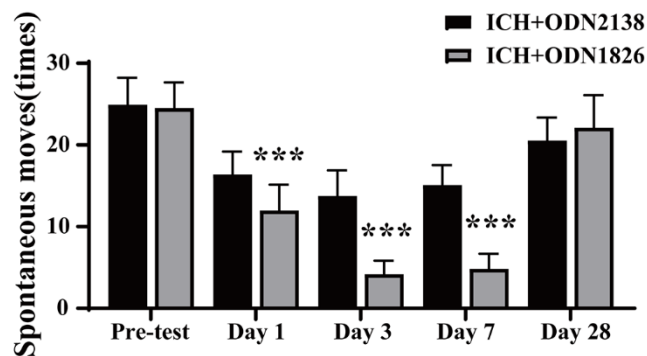


Figure S3. Spontaneous movement of ICH mice of each group. $n=44$ for each group at day 1 and pre-test, $n=33$ for each group at day 3, $n=19$ for each group at day 7 and $n=8$ for each group at day 28. Values are mean \pm SD. *** $P<0.001$ vs ICH+ODN2138 group by two-way ANOVA.

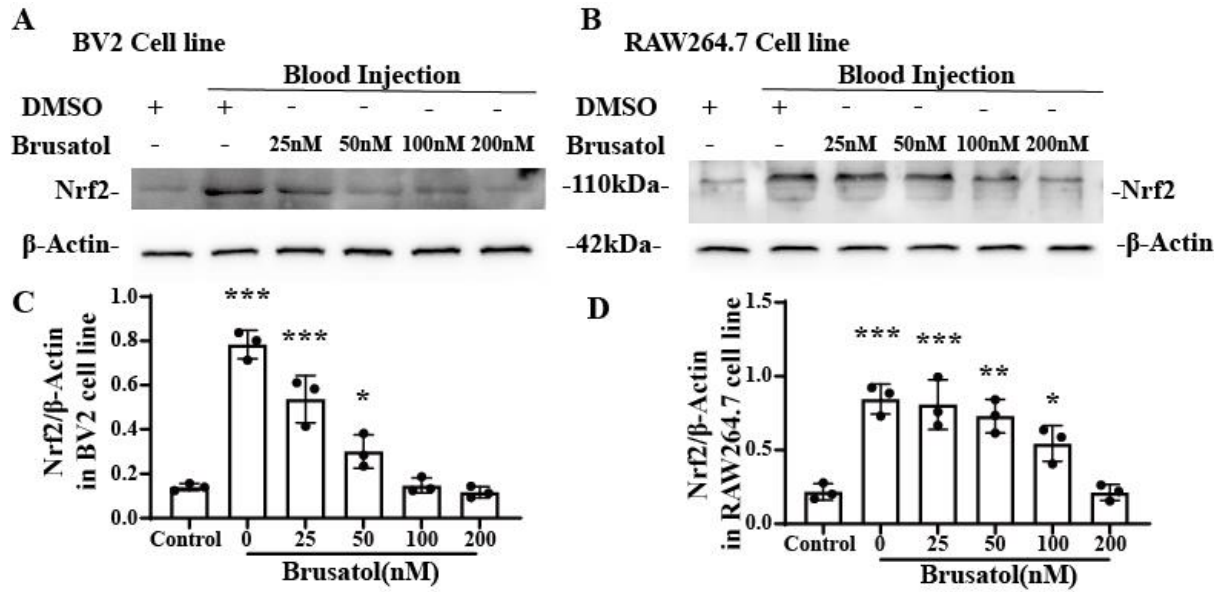


Figure S4. Brusatol concentration for Nrf2 inhibition in BV2 and RAW264.7 cell lines. **A.** Western blot for Nrf2 expression level under different Brusatol concentration in BV2 cells. **B.** Western blot for Nrf2 expression level under different Brusatol concentration in RAW264.7 cells. $n=3$ for each group. Values are mean \pm SD. * $P<0.05$, ** $P<0.01$, *** $P<0.001$ vs control group by two-way ANOVA.