**Appendix A. Supplementary data**



**Figure S1. Effects of the cGAS inhibitor RU.521 on the expression of cGAS and STING after GMH. A-D**, Representative immunoblots and quantification of cGAS (A, B) and STING (C, D) in the peri-hematomal area at 24 hours after GMH in sham-operated mice and GMH mice treated with vehicle or RU.521 (n=5). Values are mean ± SD. \**P* < 0.05.

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**Figure S2. RU.521 improves white matter injury after GMH.** **A**, Quantification of SMI-32 in the corpus callosum at day 28 after GMH (n=5). **B**, Representative images of SMI-32 in the corpus callosum at day 28 after GMH (n=6). Nuclei were stained with DAPI. Scale bar, 100 μm.



**Figure S3. Effects of RU.521 and the STING agonist-SR-717 on the expression of pTBK1 and pIRF3. A-B**, Quantification of pTBK1 (A) and pIRF3 (B) in the peri-hematomal areas at 24 hours after GMH in mice treated with RU.521 or RU.521 in combination with SR-717 (n=5). Values are mean ± SD. \**P* < 0.05.



**Figure S4.** **The STING agonist-SR-717 blocked RU.521mediated reduction in BBB breakdown. A**, Quantification of occludin in the peri-hematomal areas at 24 hours after GMH in mice treated with RU.521 or RU.521 in combination with SR-717 (n=5). **B**, Representative images of IgG perivascular leakage at 24 hours after GMH in mice treated with RU.521 or RU.521 in combination with SR-717 (n=6). Scale bar, 20 μm. Values are mean ± SD. \**P* < 0.05.