

LDC7559 is a gasdermin D (GSDMD) inhibitor via blocking [neutrophil extracellular trap](#) (NET) in the late stages .

Yu et al. explored the neuroprotective effects of [LDC7559](#), a GSDMD inhibitor. Briefly, LDC7559, siRNA-GSDMD (si-GSDMD), or equal solvent was administrated to mice with a lipopolysaccharide + nigericin (LPS + Nig) model in vitro or with controlled cortical impact brain injury. The findings revealed that inflammation and pyroptosis levels were decreased by LDC7559 or si-GSDMD treatment both in vitro and in vivo. Immunofluorescence staining, brain water content, hematoxylin, and eosin staining, and behavioral investigations suggested that LDC7559 or si-GSDMD inhibited microglial proliferation, ameliorated cerebral edema, reduced brain tissue loss, and promoted brain function recovery. Taken together, LDC7559 may inhibit pyroptosis and reduce inflammation by inhibiting GSDMD, thereby promoting the recovery of neurological function ¹⁾.

¹⁾

Yu E, Zhang E, Lv X, Yan L, Lin Z, Siaw-Debrah F, Zhang Y, Yang S, Ruan L, Zhuge Q, Ni H. LDC7559 Exerts Neuroprotective Effects by Inhibiting GSDMD-dependent Pyroptosis of Microglia in Mice with Traumatic Brain Injury. J Neurotrauma. 2022 Aug 3. doi: 10.1089/neu.2021.0318. Epub ahead of print. PMID: 35920115.

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