

Product Data Sheet

Product Name: Necrosulfonamide-d₄

Cat. No.: GC49681

Chemical Properties

Cas. No. 1795144-22-7

SMILES O=S(NC1=NC=CN=C1OC)(C2=C([2H])C([2H])=C(C([2H])=C2[2H])NC(C=CC3=CC=C([N+])([O-])=O)S3)=O=O

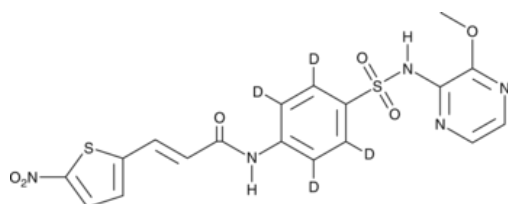
Formula C₁₈H₁₁D₄N₅O₆S₂ M.Wt 465.5

Solubility DMSO: slightly soluble, Methanol: slightly soluble Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Necrosulfonamide-d₄ is intended for use as an internal standard for the quantification of necrosulfonamide by GC- or LC-MS. Necrosulfonamide is an inhibitor of necroptosis, apoptosis, and pyroptosis.^{1,2} It inhibits IL-8-induced increases in receptor-interacting serine/threonine kinase 1 (RIPK1), RIPK3, mixed lineage kinase domain-like protein (MLKL), caspase-3, and caspase-8 levels, as well as IL-8-induced necroptosis and apoptosis in isolated human nucleus pulposus cells.¹ Necrosulfonamide binds to gasdermin D and inhibits NLRP3- and pyrin-mediated pyroptosis in mouse bone marrow-derived macrophages (BMDMs) when used at a concentration of 5 μM.² *In vivo*, necrosulfonamide (20 mg/kg) increases survival in a mouse model of LPS-induced sepsis. It also improves motor function and reduces spinal edema in a mouse model of surgically induced spinal cord injury (SCI).³

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

- 1.Zhang, Q.-X., Guo, D., Wang, F.-C., et al.Necrosulfonamide (NSA) protects intervertebral disc degeneration via necroptosis and apoptosis inhibitionEur. Rev. Med. Pharmacol. Sci.24(5)2683-2691(2020)
- 2.Rathkey, J.K., Zhao, J., Liu, Z., et al.Chemical disruption of the pyroptotic pore-forming protein gasdermin D inhibits inflammatory cell death and sepsisSci. Immunol.3(26)eaat2738(2018)
- 3.Jiao, J., Wang, Y., Ren, P., et al.Necrosulfonamide ameliorates neurological impairment in spinal cord injury by improving antioxidative capacityFront. Pharmacol.101538(2020)

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA