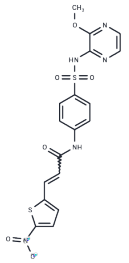
Data Sheet (Cat.No.T7129)

TargetMol

(E/Z)-Necrosulfonamide

Chemical Properties



CAS No. : 432531-71-0

Formula: C18H15N5O6S2

Molecular Weight: 461.47

Storage: Store at low temperature,Keep away from direct sunlight,Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	(E/Z)-Necrosulfonamide is a novel inhibitor of MLKL.
Targets(IC50)	MLK,Caspase,NOD-like Receptor (NLR),Nrf2,NO Synthase,Pyroptosis,Interleukin,Necroptosis,ROS,TNF
In vivo	Necrosulfonamide attenuates the spinal cord injury via necroptosis inhibition[1]
Animal Research	Pathologic condition was detected using hematoxylin-eosin staining on injured spinal cord and other major organs. Necroptosis-related factors-RIP1, RIP3, and MLKL-were detected using Western blot. Detections on mitochondrial functions such as adenosine triphosphate generation and activities of superoxide dismutase and caspase-3 were also performed. Finally, ethologic performance was detected using a 21-point open-field locomotion test[1].

Solubility Information

Solubility	DMSO: 25 mg/mL (54.17 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.167 mL	10.8349 mL	21.6699 mL
5 mM	0.4334 mL	2.167 mL	4.334 mL
10 mM	0.2167 mL	1.0835 mL	2.167 mL
50 mM	0.0433 mL	0.2167 mL	0.4334 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Wang Y , Wang J , Wang H , et al. Necrosulfonamide Attenuates the Spinal Cord Injury Via Necroptosis Inhibition[J]. World Neurosurgery, 2018:S1878875018306569.
Ouyang S, Li H, Lou L, et al. Inhibition of STAT3-ferroptosis negative regulatory axis suppresses tumor growth and alleviates chemoresistance in gastric cancer. Redox Biology. 2022: 102317
Yi Y, Gao K, Zhang L, et al. Zearalenone Induces MLKL-Dependent Necroptosis in Goat Endometrial Stromal Cells via the Calcium Overload/ROS Pathway. International Journal of Molecular Sciences. 2022, 23(17): 10170.
Menacher G , Balszuweit F , Lang S , et al. Necrosulfonamide - Unexpected effect in the course of a sulfur mustard intoxication[J]. Chemico-Biological Interactions, 2018.
Sun Y, He L, Wang T, et al. Activation of p62-Keap1-Nrf2 Pathway Protects 6-Hydroxydopamine-Induced Ferroptosis in Dopaminergic Cells[J]. Molecular Neurobiology. 2020, 57(11): 4628-4641.
Sun Y, He L, Wang T, et al. Activation of p62-Keap1-Nrf2 Pathway Protects 6-Hydroxydopamine-Induced Ferroptosis in Dopaminergic Cells. Molecular Neurobiology. 2020, 57(11): 4628-4641.
Yi Y, Gao K, Lin P, et al. Staphylococcus aureus-Induced Necroptosis Promotes Mitochondrial Damage in Goat Endometrial Epithelial Cells. Animals. 2022, 12(17): 2218.
Bi G, Liang J, Shan G, et al.Retinol saturase mediates retinoid metabolism to impair a ferroptosis defense system in cancer cells.Cancer Research.2023: CAN-22-3977.
Li Y, Hu G, Huang F, et al.MAT1A Suppression by the CTBP1/HDAC1/HDAC2 Transcriptional Complex Induces Immune Escape and Reduces Ferroptosis in Hepatocellular Carcinoma.Laboratory Investigation.2023, 103(8): 100180.
Chen C, Cheng Y, Lei H, et al.SHP2 potentiates anti-PD-1 effectiveness through intervening cell pyroptosis resistance in triple-negative breast cancer.Biomedicine & Pharmacotherapy.2023, 168: 115797.
Bi G, Liang J, Bian Y, et al.Polyamine-mediated ferroptosis amplification acts as a targetable vulnerability in cancer.Nature Communications.2024, 15(1): 2461.