Necrosulfonamide

Cat. No.: HY-100573

CAS No.: 1360614-48-7

Molecular Formula: $C_{18}H_{15}N_5O_6S_2$

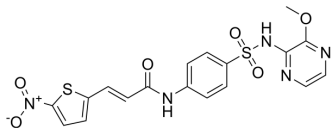
Molecular Weight: 461.47

Target: Mixed Lineage Kinase

Pathway: MAPK/ERK Pathway

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 28 mg/mL (60.68 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1670 mL	10.8349 mL	21.6699 mL
5 mM	0.4334 mL	2.1670 mL	4.3340 mL
10 mM	0.2167 mL	1.0835 mL	2.1670 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 50% PEG300 >> 50% saline
   Solubility: 10 mg/mL (21.67 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 20% SBE-β-CD in saline
   Solubility: 6.67 mg/mL (14.45 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (5.42 mM); Suspended solution; Need ultrasonic
4. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.42 mM); Suspended solution; Need ultrasonic
5. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (5.42 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Necrosulfonamide is a necroptosis inhibitor acting by selectively targeting the mixed lineage kinase domain-like protein (MLKL). Necrosulfonamide prevents MLKL-RIP1-RIP3 necrosome complex from interacting with its downstream effectors.

	MLKL is a critical substrate of RIP3 during the induction of necrosis[1].
In Vitro	Necrosulfonamide specifically blocks necrosis downstream of RIP3 activation. Necrosulfonamide inhibits MLKL-mediated necrosis by blocking Its N-terminal CC domain function[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Res. 2023 Aug 14.
- Circulation. 2022 Nov 30.
- Adv Mater. 2023 Jun;35(23):e2300548.
- Nat Cell Biol. 2023 Jun;25(6):836-847.
- Nat Commun. 2022 Nov 17;13(1):7031.

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REFERENCES

[1]. Sun L, et al. Mixed lineage kinase domain-like protein mediates necrosis signaling downstream of RIP3 kinase. Cell. 2012;148(1-2):213-227.

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