RIP1 kinase inhibitor 1

Cat. No.: HY-111409

CAS No.: 2095515-38-9

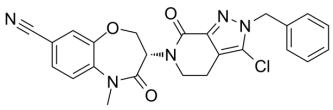
Molecular Formula: $C_{24}H_{20}ClN_5O_3$

Molecular Weight: 461.9

Target: RIP kinase

Pathway: Apoptosis

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (432.99 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1650 mL	10.8249 mL	21.6497 mL
	5 mM	0.4330 mL	2.1650 mL	4.3299 mL
	10 mM	0.2165 mL	1.0825 mL	2.1650 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 5 mg/mL (10.82 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (10.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RIP1 kinase inhibitor 1 (compound 22) is a highly potent, orally available, and brain-penetrating RIP1 kinase inhibitor (pK_i =9.04)[1].

IC_{50} & Target

pKi: 9.04 (RIP1 kinase)[1]

In Vitro

RIP1 kinase inhibitor 1 (compound 22) strongly suppresses necroptotic cell death and phosphorylation of MLKL(pMLKL) in human colorectal adenocarcinoma HT-29 cells (nectoptosis, IC_{50}=2 nM; pMLKL, IC_{50}=1.3 nM) as well as mouse L-cells NCTC 929 (nectoptosis, IC_{50}=15 nM; pMLKL, IC_{50}=2.7 nM)[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yoshikawa M, et al. Discovery of 7-Oxo-2,4,5,7-tetrahydro-6 H-pyrazolo[3,4- c]pyridine Derivatives as Potent, OrallyAvailable, and Brain-Penetrating Receptor Interacting Protein 1 (RIP1) Kinase Inhibitors: Analysis of Structure-Kinetic Relationships. J Med Chem. 2018 Mar 22;61(6):2384-2409.

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