Selonsertib

Cat. No.: HY-18938

CAS No.: 1448428-04-3

Molecular Formula: $C_{24}H_{24}FN_7O$

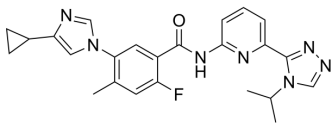
Molecular Weight: 445.49

Target: MAP3K; Apoptosis

Pathway: MAPK/ERK Pathway; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	1 year
	-20°C	6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 31 mg/mL (69.59 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	2.2447 mL	11.2236 mL	22.4472 mL
5 mM	0.4489 mL	2.2447 mL	4.4894 mL
10 mM	0.2245 mL	1.1224 mL	2.2447 mL

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

In Vivo

1. Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.62 mg/mL (5.88 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.67 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.67 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Selonsertib (GS-4997), an orally bioavailable, selective apoptosis signal-regulating kinase 1 (ASK1) inhibitor with a pIC_{50} of 8.3, has been evaluated as an experimental treatment for diabetic nephropathy and kidney fibrosis.

IC_{50} & Target

ASK1

	8.3 (pIC_{50})
In Vitro	Selonsertib (GS-4997) is a clinical stage ASK1 inhibitor, which has been evaluated as an experimental treatment for diabetic nephropathy and kidney fibrosis[1]. Selonsertib (GS-4997) is a highly selective and potent once-daily oral ASK1 inhibitor that competes with ATP in the ASK1 catalytic kinase domain[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Biomaterials. 2022 Sep 28;290:121817.
- J Hazard Mater. 2021, 125179.
- Cell Death Dis. 2023 Aug 26;14(8):561.
- Phytomedicine. 2023: 154646.
- Cell Biosci. 2021 Jan 7;11(1):9.

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REFERENCES

[1]. Lanier M, et al. Structure-Based Design of ASK1 Inhibitors as Potential Agents for Heart Failure. ACS Med Chem Lett. 2017 Feb 8;8(3):316-320.

[2]. Lin JH, et al. Design of a phase 2 clinical trial of an ASK1 inhibitor, GS-4997, in patients with diabetic kidney disease. Nephron. 2015;129(1):29-33.

[3]. Loomba R, et al. The ASK1 inhibitor selonsertib in patients with nonalcoholic steatohepatitis: A randomized, phase 2trial. Hepatology. 2018 Feb;67(2):549-559.

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

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