

MK-0159

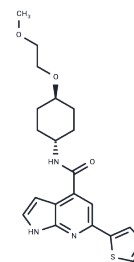
Chemical Properties

CAS No. : 2641484-61-7

Formula: C₂₀H₂₄N₄O₃S

Molecular Weight: 400.495

Storage: Keep away from direct sunlight, Keep away from moisture, Store at low temperature
 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	MK-0159 is an orally available, highly potent CD38 inhibitor with myocardial injury protection for the study of cardiac ischemia and reperfusion injury.
Targets(IC50)	CD38
In vitro	MK-0159 (0-50 μ M, 24 hours) increased the levels of NAD ⁺ both intracellularly and extracellularly in A549 cells and HMVEC cells[1].
In vivo	In mice with cardiac ischemia/reperfusion injury, MK-0159 (30 mg/kg; oral) is capable of reducing infarct size[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (199.75 mM), Sonication is recommended. ($<$ 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (8.24 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4969 mL	12.4844 mL	24.9688 mL
5 mM	0.4994 mL	2.4969 mL	4.9938 mL
10 mM	0.2497 mL	1.2484 mL	2.4969 mL
50 mM	0.0499 mL	0.2497 mL	0.4994 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

Lagu B, et al. Orally Bioavailable Enzymatic Inhibitor of CD38, MK-0159, Protects against Ischemia/Reperfusion Injury in the Murine Heart. *J Med Chem.* 2022 Jun 28.

Chen PM, et al. CD38 reduces mitochondrial fitness and cytotoxic T cell response against viral infection in lupus patients by suppressing mitophagy. *Sci Adv.* 2022 Jun 17;8(24):eabo4271.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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