

MK-0873

Chemical Properties

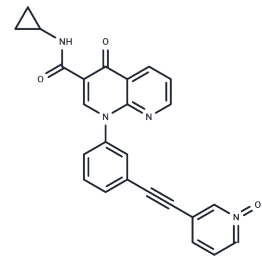
CAS No. : 500355-52-2

Formula: C₂₅H₁₈N₄O₃

Molecular Weight: 422.44

Storage: 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-0873 is a novel and potent selective phosphodiesterase 4 (PDE4) inhibitor.
Targets(IC50)	PDE
In vitro	Eight healthy, non-smoking male subjects participated in this randomized, open-label, 2-period, cross-over study. In one period subjects received an oral dose of 2.5mg MK-0873 for 6 days co-administered with a single oral dose of 250 mg theophylline on day 5. The other period consisted of a single dose of 250 mg of theophylline on day 1. In each period, blood samples were collected at predefined time points. In this study, in a limited number of subjects, co-administration of oral MK-0873 did not affect the pharmacokinetics, safety, and tolerability of oral theophylline in non-smoking healthy male subjects.[3]

Solubility Information

Solubility	DMSO: 2.11 mg/mL (4.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3672 mL	11.836 mL	23.672 mL
5 mM	0.4734 mL	2.3672 mL	4.7344 mL
10 mM	0.2367 mL	1.1836 mL	2.3672 mL
50 mM	0.0473 mL	0.2367 mL	0.4734 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

Mitra A, et al. Use of minipig skin biopsy model as an innovative tool to design topical formulation to achieve desired pharmacokinetics in humans. *J Pharm Sci.* 2015 May;104(5):1701-8.

Guay D, et al. Optimization and structure-activity relationship of a series of 1-phenyl-1,8-naphthyridin-4-one-3-carboxamides: identification of MK-0873, a potent and effective PDE4 inhibitor. *Bioorg Med Chem Lett.* 2008 Oct 15;18(20):5554-8.

Boot JD, et al. MK-0873, a PDE4 inhibitor, does not influence the pharmacokinetics of theophylline in healthy male volunteers. *Pulm Pharmacol Ther.* 2008;21(3):573-7.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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