

MK 1903

Chemical Properties

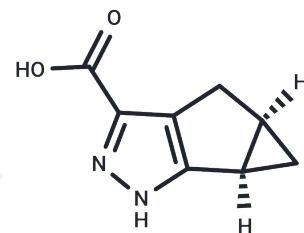
CAS No. : 1268882-43-4

Formula: C₈H₈N₂O₂

Molecular Weight: 164.16

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 1903 is a potent and selective complete agonist for the hydroxy-carboxylic acid receptor 2 (HCA2). HCA2 is also known as G protein-coupled receptor 109A(GPR109A). MK 1903 reduced Foschlin-induced cAMP production in uniform time-resolved fluorescence (htf) measurements using CHO cells expressing the human receptor (EC ₅₀ -12.9 nM).
Targets(IC ₅₀)	GPCR
In vivo	MK-1903 (Compound R, R-19a) was well tolerated and produced a robust decrease in plasma-free fatty acids.[1]

Solubility Information

Solubility	Ethanol: < 8.21 mg/mL, Sonication is recommended. DMSO: 112.5 mg/mL (685.31 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: 4 mg/mL (24.37 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	6.0916 mL	30.4581 mL	60.9162 mL
5 mM	1.2183 mL	6.0916 mL	12.1832 mL
10 mM	0.6092 mL	3.0458 mL	6.0916 mL
50 mM	0.1218 mL	0.6092 mL	1.2183 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

Boatman PD, et al. (1aR,5aR)1a,3,5,5a-Tetrahydro-1H-2,3-diaza-cyclopropa[a]pentalene-4-carboxylic acid (MK-1903): a potent GPR109a agonist that lowers free fatty acids in humans. *J Med Chem.* 2012;55(8):3644-3666.
Lauring B, et al. Niacin lipid efficacy is independent of both the niacin receptor GPR109A and free fatty acid suppression. *Sci Transl Med.* 2012;4(148):148ra115.

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