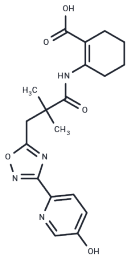
Data Sheet (Cat.No.TQ0108)

MK-6892

Chemical Properties



CAS No. : 917910-45-3

Formula: C19H22N4O5

Molecular Weight: 386.4

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-6892 is a selective and full agonist for the high-affinity nicotinic acid receptor GPR109A (Ki: 4 nM; GTPγS EC50: 16 nM).
Targets(IC50)	GPCR
In vitro	MK-6892 effectively induces the internalization of GPR109A in U2OS β-arrestin2-RrGFP cells and demonstrates a potent EC50 of 74 nM in calcium mobilization assays [2].
In vivo	MK-6892 is administered orally to WT and nicotinic acid (NA) receptor null mice on a C57Bl/6 genetic background. Following a 100 mg/kg dose, blood levels of MK-6892 reach 229 μM in WT mice and 148 μM in NA receptor null mice after 15 minutes, significantly exceeding the in vitro EC50 (240 nM). MK-6892 effectively suppresses plasma FFA in WT mice, but not in NA receptor null mice, indicating NA receptor-dependent FFA reduction [1].

Solubility Information

Solubility	DMSO: 45 mg/mL (116.46 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: 2 mg/mL (5.18 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.588 mL	12.940 mL	25.8799 mL
5 mM	0.5176 mL	2.588 mL	5.176 mL
10 mM	0.2588 mL	1.294 mL	2.588 mL
50 mM	0.0518 mL	0.2588 mL	0.5176 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

Shen HC, et al. Discovery of a biaryl cyclohexene carboxylic acid (MK-6892): a potent and selective high affinity niacin receptor full agonist with reduced flushing profiles in animals as a preclinical candidate. J Med Chem. 2010 Mar 25;53(6):2666-70.

Zhu S, Yuan Q, Li X, et al.Molecular recognition of niacin and lipid-lowering drugs by the human hydroxycarboxylic acid receptor 2.Cell Reports.2023, 42(11).

Kim HY, et al. Discovery of 4-(phenyl)thio-1H-pyrazole derivatives as agonists of GPR109A, a high affinity niacin receptor. Arch Pharm Res. 2015 Jun;38(6):1019-32.