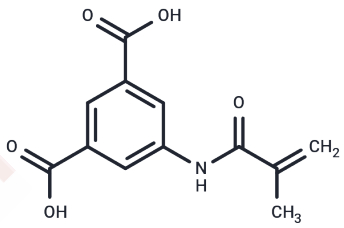
Data Sheet (Cat.No.T37131)

TargetMol

MS 15203

Chemical Properties



CAS No. : 73912-52-4

Formula: C12H11NO5

Molecular Weight: 249.22

Storage: Keep away from moisture
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	MS 15203 is a selective GPR171 agonist that increases morphine antinociception and is effective in reducing chronic pain. It can reduce chronic neuropathic and inflammatory pain in male mice.
Targets(IC50)	GPCR
In vitro	To assess the selectivity of MS 15203 for GPR171, screened the ligand against a panel of 80 different transmembrane and soluble receptors, including ~70 GPCRs. MS 15203 dose-dependently displaced radiolabeled b-LEN from hypothalamic membranes with an affinity that was lower than that of b-LEN. IC50 = 80 ± 1 (nM). [1]
In vivo	To examine the effects of long-term activation of GPR171, administered MS 15203 (2.5 mg/kg) to mice by intraperitoneal injection every third day and fed a high-fat diet to exacerbate the effects of the compound. Knockdown of GPR171 in the hypothalamus significantly at tenuated MS 15203-induced weight gain, implying that chronic administration of MS 15203 affects body weight through GPR171. [1]

Solubility Information

Solubility	DMSO: 252.5 mg/mL (1013.16 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (40.13 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (40.13 mM),Solution. *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	4.0125 mL	20.0626 mL	40.1252 mL
5 mM	0.8025 mL	4.0125 mL	8.025 mL
10 mM	0.4013 mL	2.0063 mL	4.0125 mL
50 mM	0.0803 mL	0.4013 mL	0.8025 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

Wardman JH, et al. Identification of a small-molecule ligand that activates the neuropeptide receptor GPR171 and increases food intake. Sci Signal. 2016 May 31;9(430):ra55.