

MLS1547

Chemical Properties

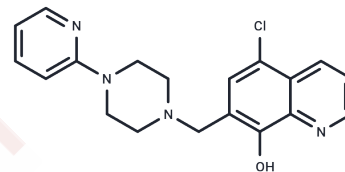
CAS No. : 315698-36-3

Formula: C₁₉H₁₉ClN₄O

Molecular Weight: 354.83

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	MLS1547 (MLS000051547) is a highly efficacious agonist of G protein-biased dopamine D2 receptor with a K _i of 1.2 μM. MLS1547 stimulates D2R G protein-mediated signaling with EC ₅₀ of 0.37 μM in a calcium mobilization assay.
Targets(IC ₅₀)	Dopamine Receptor
In vitro	MLS1547 fully antagonizes dopamine-mediated β-arrestin recruitment to the D2 dopamine receptor, with an IC ₅₀ of 9.9 μM in the DiscoverX assay and 3.8 μM in the BRET assay, and completely displaces [3H]methylspiperone binding to the D2 dopamine receptor, with a K _i of 1.2 μM[2].

Solubility Information

Solubility	DMSO: 45 mg/mL (126.82 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: 1 mg/mL (2.82 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	2.8183 mL	14.0913 mL	28.1825 mL
5 mM	0.5637 mL	2.8183 mL	5.6365 mL
10 mM	0.2818 mL	1.4091 mL	2.8183 mL
50 mM	0.0564 mL	0.2818 mL	0.5637 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

Chun LS, et al. Structure-Activity Investigation of a G Protein-Biased Agonist Reveals Molecular Determinants for Biased Signaling of the D2 Dopamine Receptor. *Front Synaptic Neurosci.* 2018;10:2. Published 2018 Feb 21.

Free RB, et al. Discovery and characterization of a G protein-biased agonist that inhibits β -arrestin recruitment to the D2 dopamine receptor. *Mol Pharmacol.* 2014;86(1):96-105.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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