MS47134

Cat. No.: HY-148244

Molecular Formula: $C_{22}H_{29}NO_3$

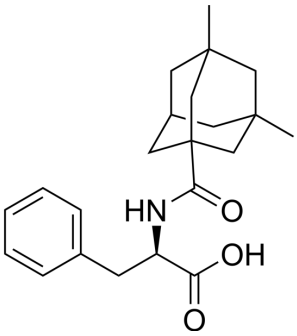
Molecular Weight: 355.47

Target: Mas-related G-protein-coupled Receptor (MRGPR)

Pathway: GPCR/G Protein

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (281.32 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8132 mL	14.0659 mL	28.1318 mL
	5 mM	0.5626 mL	2.8132 mL	5.6264 mL
	10 mM	0.2813 mL	1.4066 mL	2.8132 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.03 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.03 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (7.03 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

MS47134 is a potent and selective MRGPRX4 agonist with an EC_{50} value of 149 nM. MS47134 can be used for research of pain, itch and mast cell-mediated hypersensitivity[1].

IC_{50} & Target

EC50: 149 nM (MRGPRX4)[1]

In Vitro

MS47134 exhibits increased potency as a MRGPRX4 agonist in the FLIPR Ca^{2+} assay compared with Nateglinide (HY-B0422)[1].

MS47134 (0.001 nM-0.1 mM) shows 47-fold improved selectivity for MRGPRX4 over the Kir6.2/SUR1 potassium channel[1].

The MRGPRX family of receptors (MRGPRX1-4) is a family of mas-related G-protein-coupled receptors that have evolved

relatively recently. MRGPRX2 and MRGPRX4 are key physiological and pathological mediators of itch and related mast cell-mediated hypersensitivity reactions[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Cao C, et al. Structure, function and pharmacology of human itch GPCRs. Nature. 2021 Dec;600(7887):170-175.

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