Lactisole

Cat. No.: HY-W030796A

CAS No.: 150436-68-3

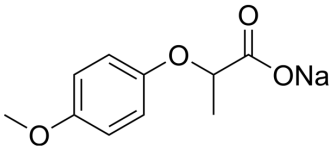
Molecular Formula: $C_{10}H_{11}NaO_4$

Molecular Weight: 218.18

Target: Taste Receptor

Pathway: GPCR/G Protein

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (572.92 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.5834 mL	22.9169 mL	45.8337 mL
	5 mM	0.9167 mL	4.5834 mL	9.1667 mL
	10 mM	0.4583 mL	2.2917 mL	4.5834 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: ≥ 2.08 mg/mL (9.53 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (9.53 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (9.53 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lactisole is a canonical antagonist of sweet taste receptor, selectively targeting to T1R3 subunit, a glucose-sensing receptor. Lactisole inhibits insulin secretion induced by glucose in mouse islets[1][2].

IC_{50} & Target

T1R3[1]

In Vitro

Lactisole (3-10 mM; 48 h) does-dependently inhibits insulin secretion induced by Acesulfame-K, Sucralose (HY-N0614) and Glycyrrhizin (HY-N0184) in mouse pancreatic β-cells MIN6 (IC_{50}~4 mM)[1].
Lactisole (5 mM; 48 h) attenuates the elevation of cytoplasmic Ca^{2+} concentration ($[Ca^{2+}]_C$) evoked by sucralose and acesulfame-K without affecting the elevation of intracellular cAMP concentration ($[cAMP]_C$)[1].

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

Caution: Product has not been fully validated for medical applications. For research use only.

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