Isoetharine mesylate

Cat. No.: HY-B1481

CAS No.: 7279-75-6

Molecular Formula: $C_{14}H_{25}NO_6S$

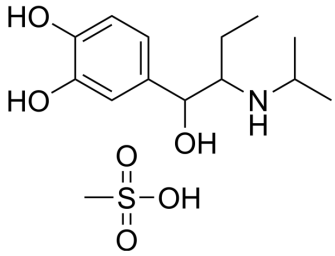
Molecular Weight: 335.42

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

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 (372.67 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9813 mL	14.9067 mL	29.8134 mL
	5 mM	0.5963 mL	2.9813 mL	5.9627 mL
	10 mM	0.2981 mL	1.4907 mL	2.9813 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 (6.20 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.20 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.20 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isoetharine (Isoetarine) mesylate is an orally active selective agonist of β-adrenergic receptors. Isoetharine mesylate is a catechol-like agent and catechol O-methyltransferase (COMT) mediates its methylation. Isoetharine mesylate can promote the production of cAMP which stimulates the relaxation of smooth muscle cells and can be used as an emphysema, bronchitis and bronchodilator[1][2].

IC_{50} & Target

β adrenergic receptor

In Vitro

Isoetharine mesylate (50 μM, 18 hours) can induce the production and release of [^{35}S]sulfated metabolites of catecholic drugs in HepG2 human hepatoma cells[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Isoetharine mesylate inhibits melanin deposition with the AC_{50} value of 5.10 mM and complete inhibition of pigment production at 7.50 mM in the zebrafish larvae model[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Katsuhisa Kurogi et al. Concerted actions of the catechol O-methyltransferase and the cytosolic sulfotransferase SULT1A3 in the metabolism of catecholic drugs. Biochem Pharmacol. 2012 Nov 1;84(9):1186-95.

[2]. Monika Maciag et al. Evaluation of β-adrenergic ligands for development of pharmacological heart failure and transparency models in zebrafish. Toxicol Appl Pharmacol. 2022 Jan 1;434:115812.

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