Ro 363 hydrochloride

Cat. No.: HY-123268A

CAS No.: 250580-70-2

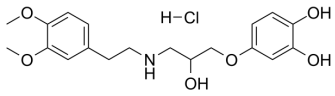
Molecular Formula: $C_{19}H_{26}ClNO_6$

Molecular Weight: 399.87

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (312.60 mM; Need ultrasonic)
H_2O : 50 mg/mL (125.04 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5008 mL	12.5041 mL	25.0081 mL
	5 mM	0.5002 mL	2.5008 mL	5.0016 mL
	10 mM	0.2501 mL	1.2504 mL	2.5008 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 16.67 mg/mL (41.69 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.25 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.25 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.25 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ro 363 hydrochloride, an effective inotropic stimulant, is a potent and highly selective β1-adrenoceptor agonist. Ro 363 hydrochloride is a cardiovascular modulator that reduces diastolic blood pressure and pronounces increases in myocardial contractility[1][2][3].

In Vitro

Isolated perfused heart preparations from guinea-pigs developed arrhythmic contractions following the administration of Ro 363 in doses producing 70-100% of its maximal chronotropic responses[1].

	In spontaneously contracted tracheal preparations from the guinea-pig, RO 363 is a full agonist and is approximately half as potent as (-)-Isoprenaline. These effects of RO 363 are due to the activation of a population of β1-receptors in the tissue since RO 363 and (-)-Isoprenaline have the same relative potencies in trachea, cardiac and ileal preparations[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In chloralose-anaesthetized cats, Ro 363, when compared to epinephrine (adrenaline), is essentially devoid of arrhythmogenic activity in animals in which cardiac sensitization is induced by U-0882 or halothane[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Maccarrone C, et al. Comparison of the Arrhythmogenic Actions of (-)-Isoprenaline, Dobutamine and the selective beta 1-adrenoceptor agonist, (+/-)-(1-[3',4'-dihydroxyphenoxy] -2-hydroxy-[3",4"-dimethoxy phenethylamino]-propane)-oxalate (Ro 363). Arzneimit

[2]. Iakovidis D, et al. In vitro activity of RO363, a beta1-adrenoceptor selective agonist. Br J Pharmacol. 1980 Apr;68(4):677-85.

[3]. Einstein R, et al. Comparison of the cardiac effects of beta-adrenoreceptor agonists in anaesthetised and conscious dogs. J Auton Pharmacol. 1986 Mar;6(1):9-14.

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