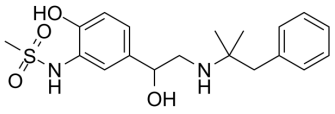
Zinterol

Cat. No.:	HY-14304
CAS No.:	37000-20-7
Molecular Formula:	$C_{19}H_{26}N_2O_4S$
Molecular Weight:	378.49
Target:	Adrenergic Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 38 mg/mL (100.40 mM; Need ultrasonic and warming)

H_2O : 1.89 mg/mL (4.99 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6421 mL	13.2104 mL	26.4208 mL
5 mM	0.5284 mL	2.6421 mL	5.2842 mL
10 mM	0.2642 mL	1.3210 mL	2.6421 mL

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

BIOLOGICAL ACTIVITY

Description

Zinterol (MJ 9184) is a potent and selective β2-adrenoceptor agonist[1]. Zinterol increases I_{Ca} in a concentration-dependent manner with an EC_{50} of 2.2 nM[2].

IC_{50} & Target

β2-adrenoceptor[1]

In Vivo

Zinterol (2.5 μg/kg i.v. bolus over 5 s) leads to ventricular arrhythmias including premature ventricular complexes (PVCs) and runs of ventricular tachycardia (VT) in heart failure (HF) rabbits. Zinterol at a lower dose (1 μg/kg i.v, n=4) does not induce ventricular arrhythmias in HF rabbits[3].

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

Animal Model:	In New Zealand White HF rabbits of either sex[3]
Dosage:	1.0 or 2.5 μg/kg
Administration:	Intravenous bolus administration; over 5 seconds

Result:	2.5 μg/kg did not significantly alter heart rate or mean arterial blood pressure in either control or HF rabbits. 2.5 μg/kg led to ventricular arrhythmias including PVCs and runs of VT (up to 13 beats long) in 4 of 6 HF rabbits (vs 0 of 5 controls, $p<0.01$). 1 μg/kg did not induce ventricular arrhythmias in HF rabbits.

CUSTOMER VALIDATION

- Seksjon for farmakologi og farmasøytisk biovitenskap Farmasøytisk institutt Det matematisk-naturvitenskapelige fakultet. 2020 Jul.

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REFERENCES

[1]. Gwee MC, et al. Pharmacological actions of a new -adrenoceptor agonist, MJ-9184-1, in anaesthetized cats. Br J Pharmacol. 1972 Nov;46(3):375-85.

[2]. Skeberdis VA, et al. Beta-2 adrenergic activation of L-type Ca^{2+} current in cardiac myocytes. J Pharmacol Exp Ther. 1997 Nov;283(2):452-61.

[3]. Desantiago J, et al. Arrhythmogenic effects of beta2-adrenergic stimulation in the failing heart are attributable to enhanced sarcoplasmic reticulum Ca load. Circ Res. 2008 Jun 6;102(11):1389-97.

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