Bopindolol

Cat. No.: HY-B1562

CAS No.: 62658-63-3

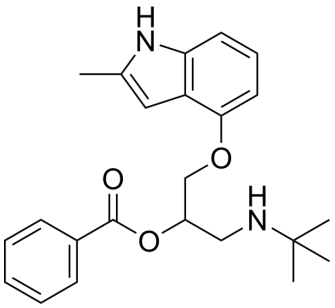
Molecular Formula: $C_{23}H_{28}N_2O_3$

Molecular Weight: 380.48

Target: Adrenergic Receptor; Renin; 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling; Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Bopindolol ((±)-Bopindolol) is an orally active antagonist of β-adrenoceptors (ARs) with partial agonist activity. Bopindolol is non-selective for β1- and β2-ARs and has low affinity for β3-AR subtype. Bopindolol has intrinsic sympathomimetic as well as membrane stabilizing actions, inhibits renin secretion, and interacts with 5-HT receptors. Bopindolol is a proagent of Pindolol (HY-B0982). Bopindolol can be used for essential and renovascular hypertension research.

IC_{50} & Target			
	β2 adrenoceptor	Beta-1 adrenergic receptor	Beta-3 adrenergic receptor

In Vivo

Bopindolol (intravenous injection; 8, 16 and 32 μg/kg) causes a dose-dependent inhibition of isoprenaline-induced tachycardia, and this agent is 4 times more potent than propranolol in anaesthetised dogs[1].

Bopindolol (0.3, 1 and 3 mg/kg; IP; single dosage) produces dose dependent decreases in diastolic blood pressure and in heart rate[2].

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

Animal Model:	Male Wistar rats (260-300 g)[2]
Dosage:	0.3, 1 and 3 mg/kg
Administration:	IP; single dosage
Result:	Produced dose dependent decreases in diastolic blood pressure, and the decrease of about 8 mmHg at 3 mg/kg. Decreased the heart rate in a dose-dependent manner.

REFERENCES

[1]. Nagatomo T, et al. Bopindolol: pharmacological basis and clinical implications. Cardiovasc Drug Rev. 2001 Spring;19(1):9-24.

[2]. Harron DW, et al. Bopindolol. A review of its pharmacodynamic and pharmacokinetic properties and therapeutic efficacy. Drugs. 1991 Jan;41(1):130-49.

[3]. H Tanaka, et al. Hypotensive effect of bopindolol in pithed rats. Gen Pharmacol. 1993 Mar;24(2):373-5.

[4]. Y Hosohata, et al. Bopindolol is a slowly dissociating beta 1-adrenoceptor antagonist when compared to other beta-blockers. Biol Pharm Bull. 1995 Aug;18(8):1066-71.

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

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