Bupranolol

Cat. No.: HY-A0252

CAS No.: 14556-46-8

Molecular Formula: $C_{14}H_{22}ClNO_2$

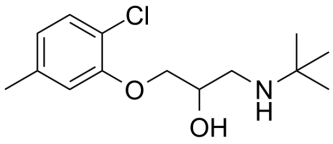
Molecular Weight: 271.78

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (183.97 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.6794 mL	18.3972 mL	36.7945 mL
	5 mM	0.7359 mL	3.6794 mL	7.3589 mL
	10 mM	0.3679 mL	1.8397 mL	3.6794 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: ≥ 2.5 mg/mL (9.20 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.20 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.20 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bupranolol is an orally active, competitive and non-selective β-adrenoceptor antagonist without intrinsic sympathomimetic activity[1].

IC_{50} & Target

β-adrenoceptor

In Vitro

Bupranolol (1~3 μM) shifts isoprenaline-induced relaxation in the presence of 30 μM propranolol. Bupranolol acts as a competitive antagonist of isoprenaline-induced relaxation in the presence of 300 nM propranolol, with a pA_2 value of 5.90.

Bupranolol antagonizes β_1- and β_2-ARs with pA_2 values of ≈9.0, and also antagonizes β_3-AR with a pA_2 value of 6.0[1].

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

REFERENCES

[1]. Chino D, et al. Pharmacological identification of β-adrenoceptor subtypes mediating isoprenaline-induced relaxation of guinea pig colonic longitudinal smooth muscle. J Smooth Muscle Res. 2018;54(0):13-27.

[2]. Babu RJ, et al. Effect of cyclodextrins on the complexation and transdermal delivery of bupranolol through rat skin. Int J Pharm. 2004;271(1-2):155-165.

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