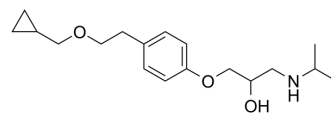


## Betaxolol

Cat. No.:	HY-B0381		
CAS No.:	63659-18-7		
Molecular Formula:	C <sub>18</sub> H <sub>29</sub> NO <sub>3</sub>		
Molecular Weight:	307.43		
Target:	Adrenergic Receptor		
Pathway:	GPCR/G Protein; Neuronal Signaling		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (325.28 mM; Need ultrasonic)  
 H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.2528 mL	16.2639 mL	32.5277 mL
	5 mM	0.6506 mL	3.2528 mL	6.5055 mL
	10 mM	0.3253 mL	1.6264 mL	3.2528 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (8.13 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (8.13 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (8.13 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Betaxolol is a selective beta1 adrenergic receptor blocker that can be used for the research of hypertension and glaucoma.

#### IC<sub>50</sub> & Target

Beta1 Adrenergic Receptor

#### In Vitro

Betaxolol hydrochloride is a cardioselective beta-adrenergic receptor blocking agent.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## In Vivo

Betaxolol hydrochloride (5 mg/kg via i.p. injection) was administered at 24 and then 44 h following the final chronic cocaine administration. Animals treated with betaxolol during cocaine withdrawal exhibited a significant attenuation of anxiety-like behavior characterized by increased time spent in the open arms and increased entries into the open arms compared to animals treated with only saline during cocaine withdrawal. Betaxolol hydrochloride did not produce anxiolytic-like effects in control animals treated chronically with saline [1]. Betaxolol hydrochloride produces less systemic beta 2- and possibly beta 1-adrenergic receptor blockade than either timolol or levobunolol. Betaxolol hydrochloride may be relatively safer to use in patients with reactive airway disease than either timolol or levobunolol [2].

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

## CUSTOMER VALIDATION

- Acs Biomater Sci Eng. 2022 Oct 10.
- J Pharmaceut Biomed. 2020, 113870.
- Chirality. 2018 Nov;30(11):1195-1205.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Rudoy, C.A. and E.J. Van Bockstaele, Betaxolol, a selective beta(1)-adrenergic receptor antagonist, diminishes anxiety-like behavior during early withdrawal from chronic cocaine administration in rats. *Prog Neuropsychopharmacol Biol Psychiatry*, 2007. 31(5)

[2]. Lesar, T.S., Comparison of ophthalmic beta-blocking agents. *Clin Pharm*, 1987. 6(6): p. 451-63.

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

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