# Oxprenolol hydrochloride

**Cat. No.:** HY-B1486

**CAS No.:** 6452-73-9

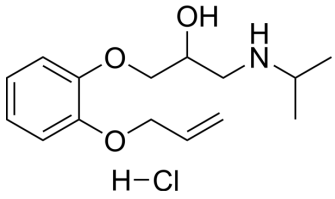
**Molecular Formula:** $C_{15}H_{24}ClNO_3$

**Molecular Weight:** 301.81

**Target:** Adrenergic Receptor

**Pathway:** GPCR/G Protein; Neuronal Signaling

**Storage:** -20°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 250 mg/mL (828.34 mM; Need ultrasonic)
$H_2O$ : 100 mg/mL (331.33 mM; Need ultrasonic)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 3.3133 mL | 16.5667 mL | 33.1334 mL |
| 5 mM | 0.6627 mL | 3.3133 mL | 6.6267 mL |
| 10 mM | 0.3313 mL | 1.6567 mL | 3.3133 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: ≥ 2.08 mg/mL (6.89 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.89 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.89 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Oxprenolol hydrochloride (Ba 39089) is an orally bioavailable β-adrenergic receptor (β-AR) antagonist with a $K_i$ of 7.10 nM in a radioligand binding assay using rat heart muscle[1].

**$IC_{50}$ & Target**

β-adrenoceptor
7.1 nM (Ki)

**In Vitro**

Oxprenolol is lipophilic[3].
?Oxprenolol shows permeability rate constant of 1.54 ± 1.54×$10^{-3}$ cm/h across abdominal human skin[3].

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

**In Vivo**

Oxprenolol (200 mg/kg/day; p.o.; daily for 3 weeks) produces effective beta-blockade[2].

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

| | |
|---|---|
| Animal Model: | Male rats (230 to 300 g body wt) of the Wistar strain[2] |
| Dosage: | 200 mg/kg |
| Administration: | Administered orally; daily for 3 weeks |
| Result: | This dosage produced effective beta-blockade. |

## CUSTOMER VALIDATION

- J Pharmaceut Biomed. 2020, 113870.

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## REFERENCES


[1]. Modamio P, et al. A comparative in vitro study of percutaneous penetration of β-blockers in human skin. International journal of pharmaceutics, 2000, 194(2): 249-259.

[2]. T Nagatomo, et al. Binding Characteristics of $^{3}$H-dihydroalprenolol to Beta-Adrenoceptors of Rat Heart Treated With Neuraminidase. Jpn J Pharmacol. 1983 Aug;33(4):851-7.

[3]. A S Manning, et al. Abrupt Withdrawal of Chronic Beta-Blockade: Adaptive Changes in Cyclic AMP and Contractility. J Mol Cell Cardiol. 1981 Nov;13(11):999-1009.





Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA