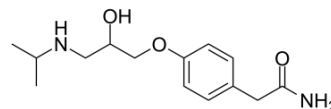


Atenolol

Cat. No.:	HY-17498	
CAS No.:	29122-68-7	
Molecular Formula:	C ₁₄ H ₂₂ N ₂ O ₃	
Molecular Weight:	266.34	
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 : 100 mg/mL (375.46 mM; Need ultrasonic)
H₂O : 8.33 mg/mL (31.28 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.7546 mL	18.7730 mL	37.5460 mL
	5 mM	0.7509 mL	3.7546 mL	7.5092 mL
	10 mM	0.3755 mL	1.8773 mL	3.7546 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 (9.39 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (9.39 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (9.39 mM); Clear solution
- Add each solvent one by one: PBS
Solubility: 36.67 mg/mL (137.68 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Atenolol ((RS)-Atenolol) is a cardioselective β₁-adrenergic receptor blocker, with a K_i of 697 nM at β₁-adrenoceptor in guinea pig left ventricle membrane. Atenolol can be used for the research of hypertension and angina pectoris^{[1][2]}.

IC₅₀ & Target

Beta-1 adrenergic receptor

697 nM (Ki)

CUSTOMER VALIDATION

- Protein Cell. 2019 Mar;10(3):178-195.
- Chemosphere. 2019 Jun;225:378-387.
- J Pharmaceut Biomed. 2020, 113870.
- Pharmacol Res Perspect. 2020 Apr;8(2):e00575.

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REFERENCES

- [1]. Heel RC, et al. Atenolol: a review of its pharmacological properties and therapeutic efficacy in angina pectoris and hypertension. *Drugs*. 1979;17(6):425-460.
- [2]. Engel G, et al. (+/-)[125Iodo] cyanopindolol, a new ligand for beta-adrenoceptors: identification and quantitation of subclasses of beta-adrenoceptors in guinea pig. *Naunyn Schmiedebergs Arch Pharmacol*. 1981;317(4):277-285.
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Caution: Product has not been fully validated for medical applications. For research use only.

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