Terazosin hydrochloride dihydrate

Cat. No.: HY-B0371A

CAS No.: 70024-40-7

Molecular Formula: $C_{19}H_{30}ClN_5O_6$

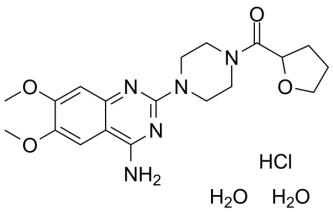
Molecular Weight: 459.92

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°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 : 31.25 mg/mL (67.95 mM; Need ultrasonic)

H_2O : 12.5 mg/mL (27.18 mM; Need ultrasonic)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.1743 mL	10.8715 mL	21.7429 mL
5 mM	0.4349 mL	2.1743 mL	4.3486 mL
10 mM	0.2174 mL	1.0871 mL	2.1743 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 10.83 mg/mL (23.55 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.44 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.44 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.44 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Terazosin hydrochloride dihydrate is a quinazoline derivative and a competitive and orally active α1-adrenoceptor antagonist. Terazosin hydrochloride dihydrate works by relaxing blood vessels and the opening of the bladder. Terazosin hydrochloride dihydrate has the potential for benign prostatic hyperplasia (BPH) and high blood pressure treatment[1][2][3].

IC_{50} & Target

α1-adrenoceptor[1]

In Vitro	Terazosin does not discriminate cloned α1-adrenoceptor subtypes transiently expressed in COS cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Terazosin can be used to promote stone discharge in treatment of ureteral stones. Terazosin is reportedly safe and effective in treatment of distal ureteral stones, especially stones >5 mm[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Neurochem Int. 2020 Dec 16;104942.

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REFERENCES

[1]. Michel MC, et al. Drugs for treatment of benign prostatic hyperplasia: affinity comparison at cloned alpha 1-adrenoceptor subtypes and in human prostate. J Auton Pharmacol. 1996 Feb;16(1):21-8.

[2]. Vincent J, et al. Pharmacological tolerance to alpha 1-adrenergic receptor antagonism mediated by terazosin in humans. J Clin Invest. 1992 Nov;90(5):1763-8.

[3]. Ju M, et al. Efficacy of combination terazosin and nifedipine therapy in postoperative treatment of distal ureteral stones after transurethral ureteroscopic lithotripsy. J Int Med Res. 2020 Apr;48(4):300060520904851.

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