Reboxetine mesylate

Cat. No.: HY-14560C

CAS No.: 98769-84-7

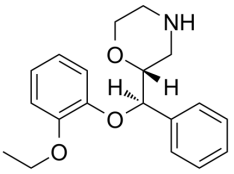
Molecular Formula: $C_{20}H_{27}NO_6S$

Molecular Weight: 409.5

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)



relative stereochemistry

SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (305.25 mM; Need ultrasonic)
H_2O : 50 mg/mL (122.10 mM; Need ultrasonic)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.4420 mL	12.2100 mL	24.4200 mL
5 mM	0.4884 mL	2.4420 mL	4.8840 mL
10 mM	0.2442 mL	1.2210 mL	2.4420 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 110 mg/mL (268.62 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.08 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.08 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Reboxetine mesylate (FCE20124 mesylate) is a potent, selective, and specific noradrenaline reuptake inhibitor (NARI) for the research of depression. Reboxetine mesylate inhibits the uptake of norepinephrine, with a K_i of 8 nM[1].

IC_{50} & Target

α adrenergic receptor

In Vitro

Reboxetine mesylate has weak affinity for muscarinic, histaminergic H_1, adrenergic α_1, and dopaminergic D_2 receptors[1].

Reboxetine mesylate preventes the Dexamethasone-induced decreases in cell viability and proliferation rate[3].

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

Cell Viability Assay[3]

Cell Line:	SH-SY5Y cells
Concentration:	0.1 μM, 1 μM, 5 μM
Incubation Time:	24 hours
Result:	Prevented the Dexamethasone-induced decreases in cell viability and proliferation rate.

In Vivo

Reboxetine mesylate (30 mg/kg; i.p.) significantly decreases the immobility time in the mice depression models[1].

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

Animal Model:	Harlan-bred, male CF-1 mice (18-20 g), depression models[1]
Dosage:	3 mg/kg, 30 mg/kg
Administration:	Intraperitoneal injection
Result:	Significantly decreased the immobility time in the mouse tail suspension test at the dose of 30 mg/kg.

CUSTOMER VALIDATION

- Nat Med. 2019 Sep;25(9):1428-1441.
- Behav Brain Res. 28 October 2021, 113642.

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REFERENCES

[1]. Wong, E.H., et al., Reboxetine: a pharmacologically potent, selective, and specific norepinephrine reuptake inhibitor. Biol Psychiatry, 2000. 47(9): p. 818-29.

[2]. Versiani, M., et al., Reboxetine, a unique selective NRI, prevents relapse and recurrence in long-term treatment of major depressive disorder. J Clin Psychiatry, 1999. 60(6): p. 400-6.

[3]. M Leskiewicz, et al. Antidepressants attenuate the dexamethasone-induced decrease in viability and proliferation of human neuroblastoma SH-SY5Y cells: a involvement of extracellular regulated kinase (ERK1/2). Neurochem Int. 2013 Nov;63(5):354-62.

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