Dapoxetine hydrochloride

Cat. No.: HY-B0304A

CAS No.: 129938-20-1

Molecular Formula: $C_{21}H_{24}ClNO$

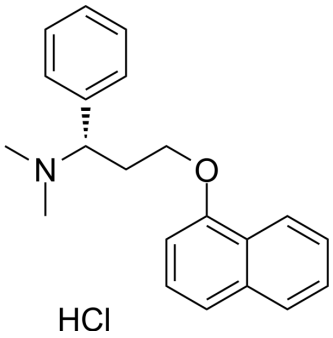
Molecular Weight: 341.87

Target: Serotonin Transporter

Pathway: 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

H_2O : 100 mg/mL (292.51 mM; Need ultrasonic)

DMSO : ≥ 32 mg/mL (93.60 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.9251 mL	14.6254 mL	29.2509 mL
5 mM	0.5850 mL	2.9251 mL	5.8502 mL
10 mM	0.2925 mL	1.4625 mL	2.9251 mL

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

BIOLOGICAL ACTIVITY

Description

Dapoxetine (LY-210448) hydrochloride is an orally active and selective serotonin reuptake inhibitor (SSRI). Dapoxetine hydrochloride can be used for the research of premature ejaculation (PE)[1].

IC_{50} & Target

Target: serotonin reuptake[1]

In Vitro

Dapoxetine hydrochloride binds to 5-HT, norepinephrine, and dopamine reuptake transporters and inhibits 5-HT, norepinephrine, and dopamine uptake with an order of potency: 5-HT >norepinephrine>dopamine.

Dapoxetine hydrochloride inhibits the uptake of [^{3}H]5-HT by the 5-HT reuptake transporter with a value of 1.12 nM, and Dapoxetine inhibits the uptake of [^{3}H]norepinephrine into cells utilizing the norepinephrine reuptake transporter and uptake of [^{3}H]dopamine by the dopamine reuptake transporter with IC_{50} values of 202 nM and 1720 nM, respectively.[1]

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

In Vivo

Dapoxetine hydrochloride (oral gavage; 1-10 mg/kg; once daily) significantly inhibits testosterone mediated increase in the prostate weight and relative prostate weight and attenuates testosterone-induced prostatic hyperplasia in rats[2].

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

Animal Model:	Adult male Wistar rats[2]
Dosage:	1 mg/kg, 5 mg/kg, 10 mg/kg
Administration:	Oral gavage; 1-10 mg/kg; once daily
Result:	Reverted most of the changes made by testosterone injection

CUSTOMER VALIDATION

- Molecules. 2023 Dec 17;28(24):8142.

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REFERENCES

[1]. Muammer Kendirci, et al. Dapoxetine, a novel selective serotonin transport inhibitor for the treatment of premature ejaculation. Ther Clin Risk Manag. 2007 Jun;3(2):277-89.

[2]. Rabab H Sayed, et al. Dapoxetine attenuates testosterone-induced prostatic hyperplasia in rats by the regulation of inflammatory and apoptotic proteins. Toxicol Appl Pharmacol. 2016 Nov 15;311:52-60.

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