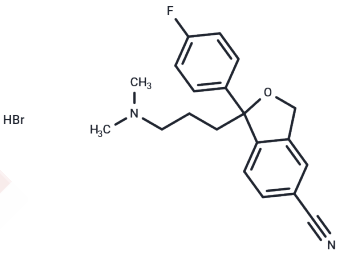
Data Sheet (Cat.No.T1483)

TargetMol

Citalopram hydrobromide

Chemical Properties



CAS No. : 59729-32-7

Formula: C20H22BrFN2O

Molecular Weight: 405.304

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Citalopram hydrobromide (XU-62-320) , a selective serotonin reuptake inhibitor (SSRI), selectively inhibits the CNS neuronal reuptake of serotonin, thereby potentiating serotonergic activity in the central nervous system (CNS). Citalopram hydrobromide is the orally bioavailable hydrobromide salt of the racemic bicyclic phthalene derivative citalopram with antidepressant activity. This agent has minimal effects on the CNS neuronal reuptake of norepinephrine (NE) and dopamine (DA).
Targets(IC50)	5-HT Receptor,Autophagy,Serotonin Transporter
In vitro	Citalopram (Lu 10-171), a new bicyclic phthalane derivative, is an extremely potent inhibitor of neuronal serotonin (5-HT) uptake but has no effect on the uptake of noradrenaline(NA) and dopamine (DA) and no antagonistic activity towards 5-HT, histamine, gamma aminobutyric acid (GABA), acetylcholine, and morphine receptors. It is an extremely specific and potent inhibitor of neuronal 5-HT uptake. Uptake mechanisms for other transmitter amines are not influenced by the drug[1]. The SSRI citalopram has a greater effect on proliferation and a lesser effect on apoptotic activity. It affects cell cycle regulation by increasing proliferative potential and decreasing apoptotic activity in a site specific manner that may be indicative of hyperplasia. Citalopram alters FGF, MSX and TGFB expression in osteoblast cell culture[3].
In vivo	Citalopram is devoid of cardiotoxic effects even when animals are exposed to concentrations far above the therapeutic level. In man citalopram is metabolized to compounds which are also potent 5-HT-uptake inhibitors without effect on noradrenaline(NA) uptake and which are found in lower concentrations than citalopram itself. Citalopram (1-16 mg/kg) stimulates the hind limb flexor reflex in the spinal rat. Citalopram potentiates 5-HT transmission~ possibly by producing very strong uptake inhibition without simultaneously blocking the post-synaptic 5-HT receptors[1].
Cell Research	Cells are cultured in alpha minimum Eagles medium supplemented with 1% penicillin/streptomycin, 10% fetal bovine serum and Amphotericin B. For control data, cells are cultured for 3 or 7 days with standard alpha proliferation media. For SSRI treatments, media is supplemented with citalopram eluted to serially diluted doses between 10?4 mol through 10?10 mol to achieve a dose response curve.(Only for Reference)

Solubility Information

Solubility	Ethanol: 6 mg/mL (14.8 mM),Sonication is recommended. DMSO: 55 mg/mL (135.7 mM),Sonication is recommended. H2O: 4 mg/mL (9.87 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4673 mL	12.3365 mL	24.6731 mL
5 mM	0.4935 mL	2.4673 mL	4.9346 mL
10 mM	0.2467 mL	1.2337 mL	2.4673 mL
50 mM	0.0493 mL	0.2467 mL	0.4935 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Hyttel J. Prog Neuropsychopharmacol Biol Psychiatry. 1982, 6(3):277-95.
Yang D, Liu H, Cai Y, et al. Branched-chain amino acid catabolism breaks glutamine addiction to sustain hepatocellular carcinoma progression. Cell Reports. 2022, 41(8): 111691.
Pollier F, et al. Neuropsychopharmacology. 2000, 22(1):64-76.
Durham E, et al. PLoS One. 2015, 10(10):e0139719.