Data Sheet (Cat.No.T13463)

TargetMol

(+)-Dihydrexidine hydrochloride

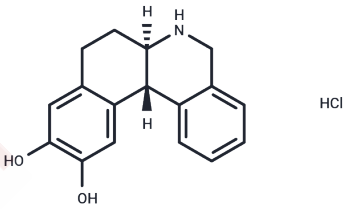
Chemical Properties

CAS No. : 158704-02-0

Formula: C17H18ClNO2

Molecular Weight: 303.78

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	(+)-Dihydrexidine hydrochloride is an agonist of dopamine D1 receptor(EC50 of 72± 21 nM).
Targets(IC50)	Others,Dopamine Receptor
In vitro	(+)-Dihydrexidine hydrochloride (DHX) is a high-potency, bioavailable agonist of D1 dopamine receptors. It is inactive (IC50 > 10 μM) against 40 other binding sites except D2 dopamine receptors (IC50 = 130 nM) and alpha-2 adrenoreceptors (IC50 = 230 nM). DHX competes stereoselectively and potently for D1 binding sites in rat striatal membranes labeled with [3H]SCH23390 with an IC50 of approximately 10 nM, compared to around 30 nM for the prototypical D1 agonist SKF38393.
In vivo	To assess the functional status of striatal neurons in response to D1 receptor activation, AC5+/+ and AC5-/- mice were injected with the D1 agonist (+)-Dihydrexidine (30 mg/kg, i.p.). After 45 minutes, the dorsal-lateral striatum and NAc were separately collected for RT-PCR analysis. The results indicate that (+)-Dihydrexidine significantly enhances the induction of immediate early genes c-fos, egr-1, and junB in the NAc of AC5-/- mice compared to AC5+/+ mice, while the induction in the dorsal-lateral striatum is suppressed in AC5-/- mice [3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2919 mL	16.4593 mL	32.9186 mL
5 mM	0.6584 mL	3.2919 mL	6.5837 mL
10 mM	0.3292 mL	1.6459 mL	3.2919 mL
50 mM	0.0658 mL	0.3292 mL	0.6584 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lewis MM, et al. Homologous desensitization of the D1A dopamine receptor: efficacy in causing desensitizationdissociates from both receptor occupancy and functional potency. J Pharmacol Exp Ther. 1998 Jul; 286(1):345-53.

Mottola DM, et al. Dihydrexidine, a novel full efficacy D1 dopamine receptor agonist. J Pharmacol Exp Ther. 1992 Jul;262(1):383-93.

Kim KS, et al. Adenylyl cyclase-5 activity in the nucleus accumbens regulates anxiety-related behavior. J Neurochem. 2008 Oct;107(1):105-15.

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