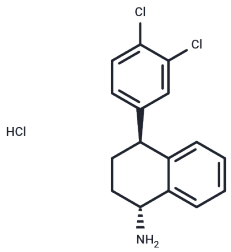
Data Sheet (Cat.No.T3526)

TargetMol

Dasotraline hydrochloride

Chemical Properties



CAS No. :	675126-08-6
Formula:	C16H16Cl3N
Molecular Weight:	328.66
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	Dasotraline hydrochloride (SEP-225289 hydrochloride) is a triple reuptake inhibitor that inhibits dopamine, norepinephrine, and serotonin transporters with IC50 values of 4, 6, and 11 nM, respectively.
Targets(IC50)	5-HT Receptor,Norepinephrine,Dopamine Receptor,Serotonin Transporter
In vivo	Acute administration of dasotraline decreases the spontaneous firing rate of LC NE (norepinephrine), VTA DA (dopamine), and DR 5-HT (serotonin) neurons in a dose-dependent manner by activating α2, D2, and 5-HT1A autoreceptors, respectively. Primarily, dasotraline significantly reduces the firing rate of LC NE neurons, while moderately impacting VTA DA and DR 5-HT neuronal activity. Concurrently, SEP-225289, known as (dasotraline), demonstrates equal potency in inhibiting both 5-HT and NE transporters, effectively extending the time for a 50% recuperation of firing activity in dorsal hippocampus CA3 pyramidal neurons following the inhibition induced by the microiontophoretic application of 5-HT and NE. Moreover, the average occupancies of dopamine and serotonin transporters by SEP-225289 escalate with dose increments, showing transporter occupancies of approximately 33%±11% and 2%±13% for 8 mg, 44%±4% and 9%±10% for 12 mg, and 49%±7% and 14%±15% for 16 mg, for dopamine and serotonin transporters, respectively.

Solubility Information

Solubility	DMSO: 83.3 mg/mL (253.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 8.33 mg/mL (25.35 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 8.33 mg/mL (25.35 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0427 mL	15.2133 mL	30.4266 mL
5 mM	0.6085 mL	3.0427 mL	6.0853 mL
10 mM	0.3043 mL	1.5213 mL	3.0427 mL
50 mM	0.0609 mL	0.3043 mL	0.6085 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

Guiard BP, et al. Characterization of the electrophysiological properties of triple reuptake inhibitors on monoaminergic neurons. Int J Neuropsychopharmacol. 2011 Mar;14(2):211-23.
DeLorenzo C, et al. SEP-225289 serotonin and dopamine transporter occupancy: a PET study.