

Product Data Sheet

Product Name: Dasotraline hydrochloride

Cat. No.: GC19118

Chemical Properties

Cas. No. 675126-08-6

SMILES N[C@@H]1CC[C@H](C2=CC=C(Cl)C(Cl)=C2)C3=CC=CC=C31.Cl[H]

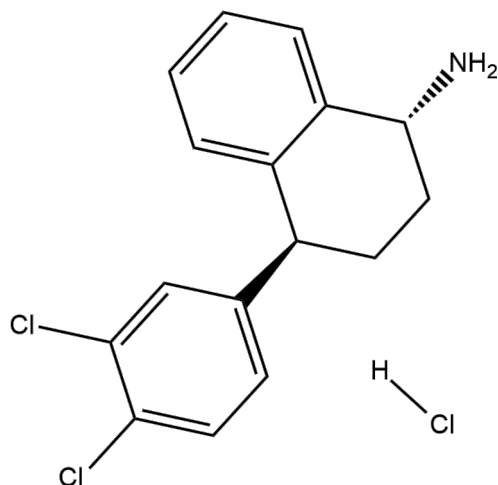
Formula $C_{16}H_{16}Cl_3N$ M.Wt 328.66

Solubility DMSO : ≥ 31 mg/mL (94.32 mM) Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

Dasotraline hydrochloride (SEP-225289 hydrochloride) is a triple reuptake inhibitor that blocks dopamine, norepinephrine, and serotonin transporters with IC₅₀ values of 4, 6, and 11 nM, respectively.

Acute administration of dasotraline dose-dependently decreases the spontaneous firing rate of LC NE, VTA DA and DR 5-HT neurons through the activation of α_2 , D2 and 5-HT_{1A} autoreceptors,

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respectively. Dasotraline predominantly inhibits the firing rate of LC NE neurons while producing only a partial decrease in VTA DA and DR 5-HT neuronal discharge. SEP-225289 is equipotent at inhibiting 5-HT and NE transporters since it prolongs to the same extent the time required for a 50% recovery of the firing activity of dorsal hippocampus CA3 pyramidal neurons from the inhibition induced by microiontophoretic application of 5-HT and NE[1]. Average dopamine and serotonin transporter occupancies increase with increasing doses of SEP-225289. Mean dopamine and serotonin transporter occupancies are $33\% \pm 11\%$ and $2\% \pm 13\%$, respectively, for 8 mg; $44\% \pm 4\%$ and $9\% \pm 10\%$, respectively, for 12 mg; and $49\% \pm 7\%$ and $14\% \pm 15\%$, respectively, for 16 mg[2].

References:

- [1]. 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.
- [2]. DeLorenzo C, et al. SEP-225289 serotonin and dopamine transporter occupancy: a PET study.

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