
Product Data Sheet

Product Name: Dasotraline

Cat. No.: GC19117

Chemical Properties

Cas. No. 675126-05-3

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

Formula C16H15Cl2N M.Wt 292.2

Solubility DMSO : ≥ 31 mg/mL (106.09 mM) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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 is a triple reuptake inhibitor that blocks dopamine, norepinephrine, and serotonin transporters with IC50 values of 4, 6, and 11 nM, respectively.

The present in-vivo electrophysiological study is undertaken to determine the effects of the triple reuptake inhibitor Dasotraline (SEP-225289) on the neuronal activities of locus coeruleus (LC) NE, ventral tegmental area (VTA) DA and dorsal raphe (DR) 5-HT neurons. Administered acutely, 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-HT1A autoreceptors, 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. Dasotraline is equipotent at inhibiting 5-HT and NE transporters since it prolongs to the same extent the time required for a 50% recovery (RT50) of the firing activity of dorsal hippocampus CA3 pyramidal neurons from the inhibition induced by microiontophoretic application of 5-HT and NE. The recovery time (RT), from the suppression of hippocampus pyramidal neuron firing activity following microiontophoresis application of 5-HT and NE, is assessed by determining the RT50 values before and after the acute intravenous administration of cumulative doses of

Caution: Product has not been fully validated for medical applications. For research use only.

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Dasotraline (1-8 mg/kg). Although Dasotraline (1 and 2 mg/kg) does not modify the firing activity of CA3 pyramidal neurons, a significant reduction (~50%) is detected with the highest dose (8 mg/kg). In rats pre-treated with WAY100635, Dasotraline (0.5-2 mg/kg i.v.) elicits a significant increase in DR 5-HT firing rate. In rats pre-treated with WAY100635, Dasotraline significantly increases the number of single spikes and bursts[1].

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.

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