Product Data Sheet

Chemical Properties

Product Name: (S)-SNAP 5114
Cas No.: 157604-55-2
M.Wt: 505.61
Formula: C30H35NO6

Chemical Name: (S)-1-(2-(tris(4-methoxyphenyl)methoxy)ethyl)piperidine-3-carboxylic acid

Canonical SMILES: OC([C@@H]1CN(CCOC(C=C2)=CC=C2OC)(C(C=C3)=CC=C3OC)C(C=C4)=CC=C4OC)CCC1)=O

Solubility: <25.28mg/ml in ethanol; <50.56mg/ml in DMSO

Storage: Desiccate at RT

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.

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

Biological Activity

Targets: Membrane Transporter/Ion Channel
Pathways: GABA Receptor

Description:

(S)-SNAP 5114 is a selective inhibitor of GABA transport with IC50 values of 5, 21 and 388 μM for hGAT-3, rGAT-2 and hGAT-1, respectively [1].

γ-Aminobutyric acid (GABA) is the major inhibitory neurotransmitter in the central nervous system (CNS) and plays a critical role in Huntington’s disease, Parkinson’s disease, epilepsy, schizophrenia and Alzheimer’s disease. GABA transporters transport GABA from extra- to
intracellular side of glial and neuronal cells [2].
(S)-SNAP 5114 is a selective GABA transport inhibitor. In HEK-293 cell lines expressing mGAT1-4, (S)-SNAP 5114 exhibited inhibitory potencies with pIC50 values of 4.07, 5.29 and 5.71 for mGAT1, mGAT3 and mGAT4 respectively and inhibited mGAT2 by 56% [2]. SNAP-5114 (100 μM) increased GABA levels to 247% in the thalamus. In juvenile rats with maximal electroshock, SNAP-5114 inhibited tonic hindlimb extension. In DBA/2 mice, SNAP-5114 inhibited sound induced convulsions in a dose-dependent way with ED50 value of 110 μmol/kg [3]. In rats, SNAP5114 (10, 50, 100 or 200 μg) inhibited the late-phase response in the formalin test and prolonged withdrawal latencies in the tail flick test, which suggested that SNAP5114 inhibited chemical and thermal nociception. In the chronic constriction injury rats, SNAP5114 inhibited mechanical allodynia in a dose-dependent way [4].

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.