Product Data Sheet

Chemical Properties

Product Name: ONO-7300243
Cas No.: 638132-34-0
M.Wt: 461.22
Formula: C28H31NO5
Synonyms: N/A

Chemical Name: 2-(4-((3,5-dimethoxy-4-methyl-N-(3-phenylpropyl)benzamido)methyl)phenyl)acetic acid
Canonical SMILES: O=C(O)CC1=CC=C(C(N(C=C3=CC=CC=C(C=C3)=C2)=O)CCCC3=CC=CC=C2)=C1

Solubility: ≥46.1mg/mL in DMSO
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.

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

Biological Activity

Targets: GPCR/G protein
Pathways: LPA Receptor

Description:

IC50: 160 nM
ONO-7300243 is a LPA1 antagonist.
Lysophosphatidic acids (LPAs), a bioactive class of phospholipids, are produced by autotaxin from lysophosphatidylcholine in blood. LPAs have a wide range of cellular responses, such as cell proliferation, intracellular Ca2+ mobilization, cell survival, and cell motility. Based on their specific
properties, LPAs have been involved in various complex physiological responses, such as the contraction of smooth muscle, wound healing, coagulation, demyelization, as well as immunological competence.

In vitro: ONO-7300243 was identified as a novel and potent LPA1 antagonist. Importantly, it was found that ONO-7300243 showed equal potency to the α1 adrenoceptor antagonist tamsulosin that is clinically used for the treatment of dysuria with benign prostatic hyperplasia (BPH) [1].

In vivo: Animal study reported that although ONO-7300243 showed only modest in vitro activity (IC50 = 0.16 μM), the oral dosing of ONO-7300243 to rats resulted in much stronger effects on reducing intraurethral pressure (88% inhibition at 10 mg/kg i.d., 62% inhibition at 3 mg/kg i.d.). When compared with tamsulosin, ONO-7300243 had no effect on the mean blood pressure at this dose, which suggested that LPA1 antagonists could be used to treat BPH without affecting the blood pressure [1].

Clinical trial: Up to now, ONO-7300243 is still in the preclinical development stage.

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.