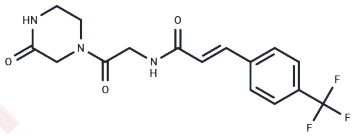
Data Sheet (Cat.No.T212644)

TargetMol

SLC6A19-IN-4

Chemical Properties



CAS No. : 2962069-39-0

Formula: C16H16F3N3O3

Molecular Weight: 355.31

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	SLC6A19-IN-4 is an allosteric competitive and orally active B0AT1 (SLC6A19) inhibitor. SLC6A19-IN-4 exhibits inhibitory activity against both human and mouse B0AT1, with corresponding IC50 values of 513 nM and 295 nM, respectively. In addition, SLC6A19-IN-4 also shows excellent metabolic stability. Its main mechanism of action is the dual inhibition of B0AT1 in the intestines (reducing phenylalanine absorption) and kidneys (promoting phenylalanine excretion), thereby significantly increasing the excretion of phenylalanine (Phe) in urine and decreasing the level of phenylalanine in plasma. Based on the above characteristics, SLC6A19-IN-4 can be used in the research of phenylketonuria (PKU) and other diseases related to SLC6 family transporters .
Targets(IC50)	Others
In vitro	After treating Jump-In TI platform cells stably expressing human SLC6A19 and human Collectrin with SLC6A19-IN-4 at a concentration range of 1500-4000 nM, SLC6A19-IN-4 can increase the Km value of the cells for d5-phenylalanine (d5-Phe) uptake, while the Vmax value does not change significantly. This result confirms its competitive inhibitory property; the Km values corresponding to different concentrations are 0.866, 5.19, and 12.1 mM, respectively, and the Vmax values are 337, 351, and 380 μmol/min/mg-protein, respectively [1]. In the cell system where mock cells are co-expressed with mouse B0AT1 and ACE2, the dissociation constant (Kd) of SLC6A19-IN-4 is 123.1 nM; while in the cell system where mock cells are co-expressed with human B0AT1 and ACE2, the Kd value of SLC6A19-IN-4 is 46.98 nM [1].
In vivo	When SLC6A19-IN-4 was administered as a single oral dose of 30 mg/kg to male Pahenu2 mice homozygous for the F263S mutation, it could reduce the systemic phenylalanine (Phe) levels in the mice by inhibiting the absorption of phenylalanine (Phe) in the intestines and promoting its excretion from the urine [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8144 mL	14.0722 mL	28.1444 mL
5 mM	0.5629 mL	2.8144 mL	5.6289 mL
10 mM	0.2814 mL	1.4072 mL	2.8144 mL
50 mM	0.0563 mL	0.2814 mL	0.5629 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

Takuya Imazu, et al. , Structure-guided development of a potent human B0AT1 inhibitor effective in a mouse model of phenylketonuria. bioRxiv. 2025. 10. 27. 684712