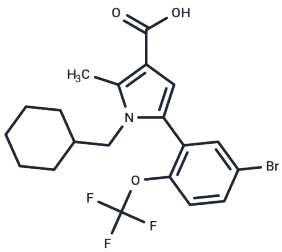
Data Sheet (Cat.No.T36806)

TPC2-A1-P

Chemical Properties



CAS No. : 2804595-86-4

Formula: C20H21BrF3NO3

Molecular Weight: 460.29

Storage: Keep away from direct sunlight,Store under nitrogen
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	TPC2-A1-P is a membrane-permeable two-pore channel 2 (TPC2) agonist that differentially activates two-pore channel 2 (TPC2) and mimics the activation of TPC2 with NAADP and PIP(2). TPC2-A1-P can be used to study neurodegenerative lysosomal storage diseases.
Targets(IC50)	Calcium Channel,Sodium Channel
In vitro	**METHODS**: Cell lines stably expressing TPC2L11A/L12A were screened with natural and synthetic small molecule libraries using a FLIPR-based Ca2+ assay, and after screening, the structure and activity of TPC2-A1-P (0.1-100 μM) and TPC2-A1-N (T36805) were confirmed by independent chemical synthesis and subsequent retesting. **RESULTS**: Plateau-responsive full-concentration effect relationships indicated EC50 values of 10.5 and 7.8 μM for TPC2-A1-P and TPC2-A1-N, respectively, and confirmed their Ca2+ solubility in intact cells. [1]

Solubility Information

Solubility	DMSO: 40 mg/mL (86.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2 mg/mL (4.35 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1725 mL	10.8627 mL	21.7254 mL
5 mM	0.4345 mL	2.1725 mL	4.3451 mL
10 mM	0.2173 mL	1.0863 mL	2.1725 mL
50 mM	0.0435 mL	0.2173 mL	0.4345 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

Susanne Gerndt, et al. Agonist-mediated switching of ion selectivity in TPC2 differentially promotes lysosomal function. Elife. 2020 Mar 16;9:e54712.
Gerndt S, et al. Discovery of lipophilic two-pore channel agonists. FEBS J. 2020 Dec;287(24):5284-5293.
Jin X, et al. Targeting Two-Pore Channels: Current Progress and Future Challenges. Trends Pharmacol Sci. 2020 Aug;41(8):582-594.