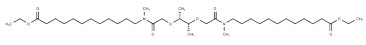
Data Sheet (Cat.No.T21663)

TargetMol

Calcium Ionophore I

Chemical Properties



CAS No. : 58801-34-6

Formula: C38H72N2O8

Molecular Weight: 685

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	Calcium Ionophore I (ETH 1001) is a highly selective Ca2+ ionophore designed for biological membranes. It functions by forming stable complexes with calcium ions, facilitating their transport across lipid bilayers. This compound is extensively utilized in the development of Ca2+-selective microelectrodes, which enable precise quantitative measurements of intracellular resting Ca2+ activities and the monitoring of slow kinetic calcium fluctuations. Its high selectivity makes it an indispensable tool for investigating ion homeostasis and signaling in various cellular models.
Targets(IC50)	Calcium Channel
In vitro	Calcium Ionophore I (ETH 1001) selectively transports Ca^{2+} across biological membranes without permeating Mg^{2+}, exhibiting exceptional divalent cation discrimination. It is widely used in Ca^{2+}-selective microelectrodes for high spatiotemporal resolution monitoring of intracellular Ca^{2+} dynamics [1][2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4599 mL	7.2993 mL	14.5985 mL
5 mM	0.292 mL	1.4599 mL	2.9197 mL
10 mM	0.146 mL	0.7299 mL	1.4599 mL
50 mM	0.0292 mL	0.146 mL	0.292 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

T R Hinds, et al. The effect of ETH 1001 on ion fluxes across red blood cell membranes. Cell Calcium. 1985 Jun;6(3):265-79.

D Ammann. Ca2+-selective microelectrodes. Cell Calcium. 1985 Apr;6(1-2):39-55.

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