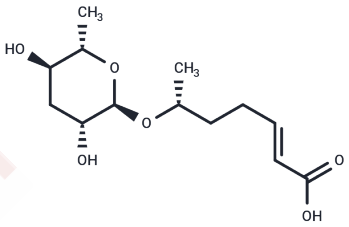
Data Sheet (Cat.No.T38515)

TargetMol

Ascr#7

Chemical Properties



CAS No. : 1139837-37-8

Formula: C13H22O6

Molecular Weight: 274.31

Storage: Keep away from direct sunlight
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	Ascr#7 is a small-molecule glycolipid pheromone secreted by Caenorhabditis elegans, belonging to the ascaroside family. These compounds are often referred to as "dauer pheromones" and serve as critical chemical signals regulating development, social behavior, and stress responses in nematodes. The expression of Ascr#7 is strongly dependent on diet and developmental stage. Its primary biological function is to induce the formation of long-lived and highly stress-resistant dauer larvae. This mechanism allows nematodes to arrest normal development and enter a specialized diapause state for survival during adverse environmental conditions such as food scarcity or high population density.
Targets(IC50)	Others
In vitro	Ascr#7 acts as a potent developmental regulator in C. elegans by triggering the shift to the dauer pathway via sensory GPCRs. Its biosynthesis and secretion are dynamically modulated by nutritional status and population density, serving as a proxy for environmental quality [1].

Solubility Information

Solubility	H2O: 80.00 mg/mL (291.64 mM),Sonication is recommended. DMSO: 160.00 mg/mL (583.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6455 mL	18.2276 mL	36.4551 mL
5 mM	0.7291 mL	3.6455 mL	7.291 mL
10 mM	0.3646 mL	1.8228 mL	3.6455 mL
50 mM	0.0729 mL	0.3646 mL	0.7291 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

Kaplan F, et, al. Ascaroside expression in Caenorhabditis elegans is strongly dependent on diet and developmental stage. PLoS One. 2011 Mar 15;6(3):e17804.