

MALTOTETRAOSE

Chemical Properties

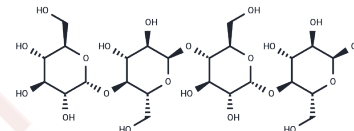
CAS No. : 34612-38-9

Formula: C₂₄H₄₂O₂₁

Molecular Weight: 666.58

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	Maltotetraose (Fujioligo 450) are potent inhibitors of TNF- α -induced intercellular adhesion molecule-1 (ICAM-1) expression, maltotetraose may be beneficial in the suppression of early atherosclerosis development.
Targets(IC50)	NF- κ B, Endogenous Metabolite, Antibacterial, Integrin, TNF
In vivo	Maltotetraose reduced PDGF-induced sprout formation by mouse aorta explants and inhibited TNF- α -induced NF- κ B activation and ICAM-1 expression in MOVAS-1 cells[1].
Animal Research	Ex vivo migration of VSMCs was measured by aortic . Mouse thoracic aortas were excised from 8-week-old male Balb/c mice and adipose tissue was removed. The aortas were sectioned into 1-mm-long cross-sections, rinsed with serum-free DMEM, treated with 1 mg/mL collagenase type II, placed in matrigel-coated wells, covered with 50 μ L matrigel, and allowed to gel for more than 30 min at 37°C in a 5% CO ₂ atmosphere. The aortic rings were treated with 20 μ g/mL MALTOTETRAOSE for 30 min, followed by stimulation with 20 ng/mL PDGF-BB. Aortic ring sprouts were photographed on day 7[1].

Solubility Information

Solubility	DMSO: 55 mg/mL (82.51 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5002 mL	7.501 mL	15.002 mL
5 mM	0.300 mL	1.5002 mL	3.0004 mL
10 mM	0.150 mL	0.7501 mL	1.5002 mL
50 mM	0.030 mL	0.150 mL	0.300 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

Shin S Y , Jung J Y , Yong Y , et al. Inhibition of PDGF-induced migration and TNF α -induced ICAM-1 expression by maltotetraose from bamboo stem extract (BSE) in mouse vascular smooth muscle cells[J]. Molecular Nutrition & Food Research, 2016, 60(9):2086-2097.

Arfelli G , Sartini E . Characterisation of brewpub beer carbohydrates using high performance anion exchange chromatography coupled with pulsed amperometric detection[J]. Food Chemistry, 2014, 142:152-158.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481