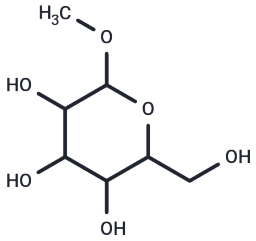
Data Sheet (Cat.No.T22365)

TargetMol

Methyl α-D-mannopyranoside

Chemical Properties



CAS No. : 617-04-9

Formula: C7H14O6

Molecular Weight: 194.18

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	Methyl α-D-mannopyranoside (Methyl α-D-mannopyranoside) can be used as an intermediate for chemical sythesis and can target macrophages in anti-tuberculosis inhalation therapy[1].
Targets(IC50)	Antibacterial
In vivo	Methyl α-D-mannopyranoside, a competitor inhibitor of the binding of mannose by Escherichia coli, was tested for its ability to prevent infection of the urinary tract of mice with infective strains of the organisms[2].

Solubility Information

Solubility	DMSO: 99 mg/mL (509.84 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (16.99 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	5.1499 mL	25.7493 mL	51.4986 mL
5 mM	1.030 mL	5.1499 mL	10.2997 mL
10 mM	0.515 mL	2.5749 mL	5.1499 mL
50 mM	0.103 mL	0.515 mL	1.030 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

Maretti E, et, al. Surface engineering of Solid Lipid Nanoparticle assemblies by methyl α-d-mannopyranoside for the active targeting to macrophages in anti-tuberculosis inhalation therapy. Int J Pharm. 2017 Aug 7; 528(1-2): 440-451.

Aronson M, et, al. Prevention of colonization of the urinary tract of mice with Escherichia coli by blocking of bacterial adherence with methyl alpha-D-mannopyranoside. J Infect Dis. 1979 Mar;139(3):329-32.