Data Sheet (Cat.No.T10755)

TargetMol

Celgosivir hydrochloride

Chemical Properties

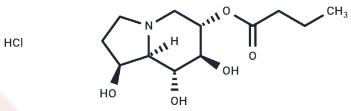
CAS No. : 141117-12-6

Formula: C12H22ClNO5

Molecular Weight: 295.76

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Celgosivir hydrochloride (MBI 3253 hydrochloride) is an α-glucosidase I inhibitor and inhibits bovine viral diarrhoea virus (BVDV) (IC50: 1.27 μM).
Targets(IC50)	Others
In vitro	Celgosivir is more effective (IC50: 20 μM) than the parent molecule (IC50: 254 μM) at causing the accumulation of glucosylated oligosaccharides in HIV-infected cells by inhibition of glycoprotein processing. Celgosivir exhibits potent antiviral activity against HIV-1 (IC50: 2.0 μM) [1]. BVDV is a closely related virus of hepatitis C virus (HCV). Celgosivir inhibits BVDV with IC50 values of 16 and 47 μM in plaque assay and cytopathic effect assay, respectively [2]. Celgosivir inhibits DENV2 replication with an EC50 of 0.2 μM. The EC50 values against DENV1, 3, and 4 are less than 0.7 μM [3].
In vivo	During primary infection with a mouse-adapted DENV strain S221, mice show increased viremia on day 3, yet 80% survived day 10 with a virus completely cleared by day 8 [3]. Celgosivir (50 mg/kg, BID for 5 days) fully protects AG129 mice from lethal infection with a mouse-adapted dengue virus and is effective even after 48 h delayed treatment. The protection by celgosivir is dose- and schedule-dependent and that a twice-a-day regimen of 50, 25, or 10 mg/kg is more protective than a single daily dose of 100 mg/kg. Pharmacokinetics studies of celgosivir in mice show that it rapidly metabolizes to castanospermine [4].

Solubility Information

Solubility	H2O: 100 mg/mL (338.11 mM),Sonication is recommended. DMSO: 100 mg/mL (338.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3811 mL	16.9056 mL	33.8112 mL
5 mM	0.6762 mL	3.3811 mL	6.7622 mL
10 mM	0.3381 mL	1.6906 mL	3.3811 mL
50 mM	0.0676 mL	0.3381 mL	0.6762 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.

Reference

Taylor DL, et al. Inhibition of alpha-glucosidase I of the glycoprotein-processing enzymes by 6-O-butanoylcastanospermine (MDL 28,574) and its consequences in human immunodeficiency virus-infected T cells. Antimicrob Agents Chemother. 1994 Aug;38(8):1780-7.

Whitby K, et al. Action of celgosivir (6 O-butanoyl castanospermine) against the pestivirus BVDV: implications for the treatment of hepatitis C. Antivir Chem Chemother. 2004 May;15(3):141-51.

Watanabe S, et al. Dose- and schedule-dependent protective efficacy of celgosivir in a lethal mouse model for dengue virus infection informs dosing regimen for a proof of concept clinical trial. Antiviral Res. 2012 Oct;96(1):32-5.

Rathore AP, et al. Celgosivir treatment misfolds dengue virus NS1 protein, induces cellular pro-survival genes andprotects against lethal challenge mouse model. Antiviral Res. 2011 Dec;92(3):453-60.