Catalog # 10-2798

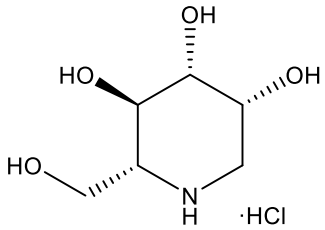
Deoxymannojirimycin HCl

CAS# 73465-43-7

2R-(Hydroxymethyl)-3R,4R,5R-piperidinetriol hydrochloride

1,5-Dideoxy-1,5-imino-D-mannitol hydrochloride

Lot # X103454



Potent and selective inhibitor of α-mannosidase I.[1,2] Inhibits the conversion of high mannose to complex oligosaccharides.[3] Attenuates tunicamycin-, thapsigargin- and Aβ1-42-induced ER stress dependent neuronal cell death and protects primary cultured mouse cortical neurons from Aβ1-42 toxicity.[4] Increases titers (4 fold) in the production of lentivirus vectors with enhanced efficiency in targeting dendritic cells.[5,6]

1) Bischoff *et al*. (1986), *The use of 1-deoxymannojirimycin to evaluated the role of various alpha-mannosidases in oligosaccharide processing in intact cells*; J. Biol. Chem., **261** 4766
2) Bischoff *et al*. (1984), *The effect of 1-deoxymannojirimycin on rat liver alpha mannosidases.*; Biochem. Biophys. Res. Commun., **125** 324
3) Fuhrmann *et al*. (1984), *Novel mannosidase inhibitor blocking conversation of high mannose to complex oligosaccharides*; Nature, **307** 755
4) Miyake and Nagai (2009), *Inhibition of alpha-mannosidase attenuates endoplasmic reticulum stress-induced neuronal cell death*; Neurotoxicology, **30** 144
5) Tai *et al*. (2011), *Production of lentiviral vectors with enhanced efficiency to target dendritic cells by attenuating mannosidase activity of mammalian cells*; J. Biol. Eng., **5** 1
6) Lee *et al*. (2012), *Construction of stable producer cells to make high-titer lentiviral vectors for dendritic cell-based vaccination*; Biotechnol. Bioeng., **109** 1551

PHYSICAL DATA

Molecular Weight:	199.63
Molecular Formula:	$C_6H_{13}NO_4$ HCl
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	Water (up to 5 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in distilled water may be stored at -20°C for up to 2 months.

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