



Catalog # 10-2409

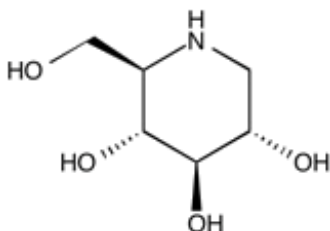
Deoxynojirimycin

19130-96-2

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

1-Deoxynojirimycin

Lot # X101416



Inhibits α -glucosidase I and II^{1,2}. Inhibits human immunodeficiency virus envelope glycoprotein-mediated membrane fusion at the CXCR4 binding step³. May be used to produce an affinity ligand for purifying glucosidase 1⁴. Was used to inhibit ER glucosidases I and II allowing for the discovery of a second mechanism for deglycosylation of N-linked oligosaccharides in PhaR1.7, a mouse lymphoma cell line⁵.

- 1) Fuhrmann *et al.* (1985), *Inhibitors of oligosaccharide processing*; Biochim. Biophys. Acta, **825** 95
- 2) Hughs and Rudge (1994), *Deoxynojirimycin: synthesis and biological activity*; Nat. Prod. Rep., **11** 135
- 3) Papandreou *et al.* (2002), *The alpha-glucosidase inhibitor 1-deoxynojirimycin blocks human immunodeficiency virus envelope glycoprotein-mediated membrane fusion at the CXCR4 binding step*; Mol. Pharmacol., **61** 186
- 4) Hettkamp *et al.* (1984), *Purification by affinity chromatography of glucosidase I, an endoplasmic reticulum hydrolase involved in the processing of asparagine-linked oligosaccharides*; Eur. J. Biochem., **142** 85
- 5) Suh *et al.* (1992), *Identification of a novel mechanism for the removal of glucose residues from high mannose-type oligosaccharides*; J. Biol. Chem., **267** 21671

PHYSICAL DATA

Molecular Weight:	163.17
Molecular Formula:	C ₆ H ₁₃ NO ₄
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	Water (up to 25 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in distilled water may be stored at -20°C for up to 3 months.

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