

Certificate of Analysis

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Product Name: Voglibose

Catalog No.: 3596

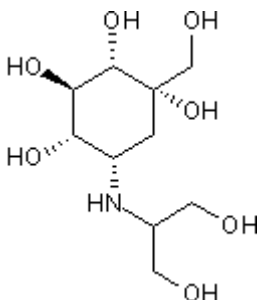
Batch No.: 1

CAS Number: 83480-29-9

IUPAC Name: 3,4-Dideoxy-4-[[2-hydroxy-1-(hydroxymethyl)ethyl]amino]-2-C-(hydroxymethyl)-D-epi-inositol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀H₂₁NO₇
Batch Molecular Weight: 267.28
Physical Appearance: White solid
Solubility: water to 100 mM
DMSO to 75 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 163 - 164°C
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = +21.8 (Concentration = 1, Solvent = Water)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	44.94	7.92	5.24
Found	44.88	7.82	5.47

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Orally active α -glucosidase inhibitor (IC_{50} values are 3.9 and 6.4 nM at sucrase and maltase respectively). Increases glucagon-like peptide 1 (GLP-1) secretion and decreases food consumption in ob/ob mice, and reduces plasma concentrations of glucose, triglycerides and insulin in Wistar fatty rats. Exhibits antidiabetic and antiobesity activity in vivo.

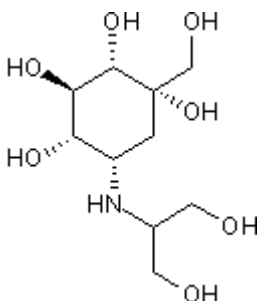
Physical and Chemical Properties:

Batch Molecular Formula: $C_{10}H_{21}NO_7$

Batch Molecular Weight: 267.28

Physical Appearance: White solid

Batch Molecular Structure:



References:

Matsuo et al (1992) Effect of an intestinal disaccharidase inhibitor (AO-128) on obesity and diabetes. *Am.J.Clin.Nutr.* **55** 314S. PMID: 1728846.

Matsui et al (2009) α -Glucosidase inhibition assay in an enzyme-immobilized amino-microplate. *Anal.Sci.* **25** 559. PMID: 19359799.

Moritoh et al (2009) Chronic administration of voglibose, an α -glucosidase inhibitor, increases active glucagon-like peptide-1 levels by increasing its secretion and decreasing dipeptidyl peptidase-4 activity in ob/ob mice. *J.Pharmacol.Exp.Ther.* **329** 669. PMID: 19208898.

Storage: Store at $-20^{\circ}C$

Solubility & Usage Info:

water to 100 mM

DMSO to 75 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}C$ water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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