

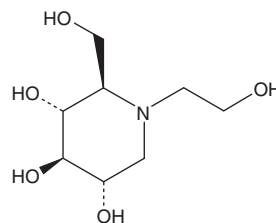
PRODUCT INFORMATION



Miglitol

Item No. 15014

CAS Registry No.: 72432-03-2
Formal Name: 1-(2-hydroxyethyl)-2R-(hydroxymethyl)-3R,4R,5S-piperidinetriol
Synonym: BAY-1099
MF: C₈H₁₇NO₅
FW: 207.2
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Miglitol is supplied as a crystalline solid. A stock solution may be made by dissolving the miglitol in the solvent of choice, which should be purged with an inert gas. Miglitol is soluble in the organic solvent DMSO at a concentration of approximately 3 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of miglitol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of miglitol in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Miglitol is an inhibitor of α -glucosidases (IC_{50} s = 0.35, 0.11, 1.3, and 1.2 μ M for human lysosomal α -glucosidase and rat sucrase, maltase, and isomaltase, respectively).¹ It is selective for human α - over β -glucosidase (IC_{50} = 84 μ M). Miglitol (10 mg/kg) decreases blood glucose levels in sucrose-loaded Goto-Kakizaki (GK) type 2 diabetic rats.² Dietary administration of miglitol (40 mg/100 g diet) for 8 weeks decreases changes in HbA1c levels compared with control rats fed a normal diet. Formulations containing miglitol have been used in the treatment of type 2 diabetes.

References

1. Kuriyama, C., Kamiyama, O., Ikeda, K., *et al.* *In vitro* inhibition of glycogen-degrading enzymes and glycosidases by six-membered sugar mimics and their evaluation in cell cultures. *Bioorg. Med. Chem.* **16(15)**, 7330-7336 (2008).
2. Goda, T., Suruga, K., Komori, A., *et al.* Effects of miglitol, an α -glucosidase inhibitor, on glycaemic status and histopathological changes in islets in non-obese, non-insulin-dependent diabetic Goto-Kakizaki rats. *Br. J. Nutr.* **98(4)**, 702-710 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/08/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM