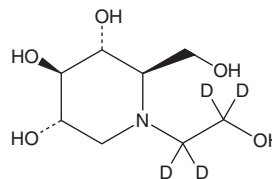


PRODUCT INFORMATION



Miglitol-d₄ Item No. 30139

Formal Name: 1-(2-hydroxyethyl-1,1,2,2-d₄)-2R-(hydroxymethyl)-3R,4R,5S-piperidinetriol
MF: C₈H₁₃D₄NO₅
FW: 211.3
Chemical Purity: ≥98% (Miglitol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Miglitol-d₄ is intended for use as an internal standard for the quantification of miglitol (Item No. 15014) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Miglitol-d₄ is supplied as a solid. A stock solution may be made by dissolving the miglitol-d₄ in the solvent of choice, which should be purged with an inert gas. Miglitol-d₄ is soluble in the organic solvent DMSO.

Description

Miglitol is an inhibitor of α -glucosidases (IC₅₀s = 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 (IC₅₀ = 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
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