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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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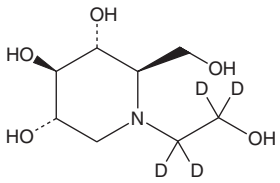
PRODUCT INFORMATION

Miglitol-d_4

Item No. 30139

Formal Name:	1-(2-hydroxyethyl-1,1,2,2-d_4)-2R-(hydroxymethyl)-3R,4R,5S-piperidinetriol
MF:	$C_8H_{13}D_4NO_5$
FW:	211.3
Chemical Purity:	≥98% (Miglitol)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
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-d_4 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-d_4 is supplied as a solid. A stock solution may be made by dissolving the miglitol-d_4 in the solvent of choice, which should be purged with an inert gas. Miglitol-d_4 is soluble in the organic solvent DMSO.

Description

Miglitol is an inhibitor of α-glucosidases (IC_{50}s = 0.35, 0.11, 1.3, and 1.2 µM 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 µM). 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).

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