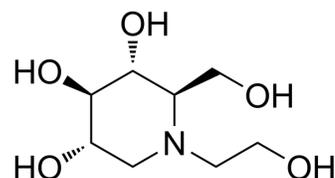


## Miglitol

Cat. No.:	HY-B0481		
CAS No.:	72432-03-2		
Molecular Formula:	C <sub>8</sub> H <sub>17</sub> NO <sub>5</sub>		
Molecular Weight:	207.22		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 200 mg/mL (965.16 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		4.8258 mL	24.1289 mL	48.2579 mL
	5 mM		0.9652 mL	4.8258 mL	9.6516 mL
	10 mM		0.4826 mL	2.4129 mL	4.8258 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

1. Add each solvent one by one: PBS  
 Solubility: 100 mg/mL (482.58 mM); Clear solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

#### Description

Miglitol is an oral anti-diabetic drug that acts by inhibiting the ability of the patient to breakdown complex carbohydrates into glucose. Target: Others Miglitol is an oral anti-diabetic drug that acts by inhibiting the ability of the patient to breakdown complex carbohydrates into glucose. It is primarily used in diabetes mellitus type 2 for establishing greater glycemic control by preventing the digestion of carbohydrates (such as disaccharides, oligosaccharides, and polysaccharides) into monosaccharides which can be absorbed by the body. Miglitol inhibits glycoside hydrolase enzymes called alpha-glucosidases. Since miglitol works by preventing digestion of carbohydrates, it lowers the degree of postprandial hyperglycemia. It must be taken at the start of main meals to have maximal effect. Its effect will depend on the amount of non-monosaccharide carbohydrates in a person's diet. Dietary supplementation with miglitol from pre-onset stage in OLETF rats delays the onset and development of diabetes and preserves the insulin secretory function of pancreatic islets [1]. Miglitol was orally administered at 40 mg/100 g of high-fat diet containing 45% kcal as fat to 12-week-old rats for 29 days, and age-matched rats without the agent were used as the respective controls [2].

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## REFERENCES

- [1]. Fukaya, N., et al., The alpha-glucosidase inhibitor miglitol delays the development of diabetes and dysfunctional insulin secretion in pancreatic beta-cells in OLETF rats. Eur J Pharmacol, 2009. 624(1-3): p. 51-7.
- [2]. Hirata, A., et al., Effect of miglitol, an alpha-glucosidase inhibitor, on atherogenic outcomes in balloon-injured diabetic rats. Horm Metab Res, 2009. 41(3): p. 213-20.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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