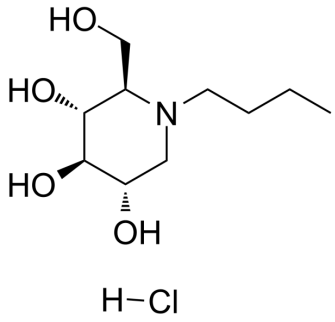
Miglustat hydrochloride

Cat. No.:	HY-17020A
CAS No.:	210110-90-0
Molecular Formula:	$C_{10}H_{22}ClNO_4$
Molecular Weight:	255.74
Target:	Others
Pathway:	Others
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 65 mg/mL (254.16 mM; Need ultrasonic)
H_2O : ≥ 34 mg/mL (132.95 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.9102 mL	19.5511 mL	39.1022 mL
5 mM	0.7820 mL	3.9102 mL	7.8204 mL
10 mM	0.3910 mL	1.9551 mL	3.9102 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3.25 mg/mL (12.71 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3.25 mg/mL (12.71 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.25 mg/mL (12.71 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Miglustat hydrochloride is an inhibitor of glucosylceramide synthase, primarily to treat Type I Gaucher disease (GD1).Target: OthersMiglustat is an inhibitor of the ceramide-specific glycosyltransferase, which catalyzes the first step of glycosphingolipid biosynthesis and is currently approved for the oral treatment of type 1 GD [1]. Consumption of a standard high-fat breakfast within 30 minutes before administration of miglustat significantly reduced peak exposure but did not significantly affect the extent of systemic exposure to miglustat. The peak plasma concentration (C(max)) decreased by 36% on average following administration with food. Area under the plasma concentration-time curve (AUC(0-infinity)) showed a modest (14%) decrease with food, but the 90% confidence interval was within the acceptance limit of 80% to 125%. The

median (min-max) time to C(max) (t(max)) was prolonged from 2.5 (1.0-4.0) hours in the fasted state to 4.5 (1.5-8.0) hours in the fed state, whereas the apparent terminal half-life was approximately 8 hours and not affected by food [2].

CUSTOMER VALIDATION

- Cell. 2019 Dec 12;179(7):1483-1498.e22.

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REFERENCES

[1]. Abian, O., et al., Therapeutic strategies for Gaucher disease: miglustat (NB-DNJ) as a pharmacological chaperone for glucocerebrosidase and the different thermostability of velaglucerase alfa and imiglucerase. Mol Pharm, 2011. 8(6): p. 2390-7.

[2]. van Giersbergen, P.L. and J. Dingemanse, Influence of food intake on the pharmacokinetics of miglustat, an inhibitor of glucosylceramide synthase. J Clin Pharmacol, 2007. 47(10): p. 1277-82.

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