Miglustat

Cat. No.: HY-17020

CAS No.: 72599-27-0

Molecular Formula: $C_{10}H_{21}NO_4$

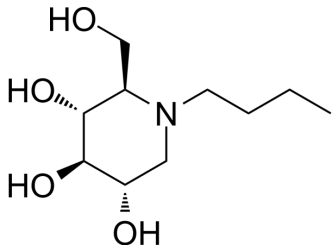
Molecular Weight: 219.28

Target: Glucosylceramide Synthase (GCS)

Pathway: Neuronal Signaling

Storage: 4°C, stored under nitrogen

* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 250 mg/mL (1140.09 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.5604 mL	22.8019 mL	45.6038 mL
	5 mM	0.9121 mL	4.5604 mL	9.1208 mL
	10 mM	0.4560 mL	2.2802 mL	4.5604 mL

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

BIOLOGICAL ACTIVITY

Description

Miglustat (N-Butyldeoxynojirimycin) is an orally active and reversible ceramide glucosyltransferase inhibitor. Miglustat can be used for the research of type I gaucher disease[1].

In Vitro

Miglustat (200 μM; 2, 4 and 24 h) restores F508del-CFTR (cystic fibrosis transmembrane conductance regulator) function in cystic fibrosis (CF) bronchial epithelial IB3-1 and CuFi-1 cells. Miglustat reduces the inflammatory response to P. aeruginosa in both CF and non-CF bronchial cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Miglustat (0.2 mg/kg; oral administration; once) is able to rescue synaptic plasticity deficits, to restore ERKs activation and to counteract hyperexcitability[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	NPC1−/− mice[1]
Dosage:	0.2 mg/kg

Administration:	Oral administration; once
Result:	Was able to rescue synaptic plasticity deficits, to restore ERKs activation and to counteract hyperexcitability.

CUSTOMER VALIDATION

- Cell. 2019 Dec 12;179(7):1483-1498.e22.
- Cell Rep. 2022 Jul 5;40(1):111049.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Maria Cristina Dechecchi, et al. Anti-inflammatory effect of miglustat in bronchial epithelial cells. J Cyst Fibros. 2008 Nov;7(6):555-65.

[2]. G D'Arcangelo, et al. Miglustat Reverts the Impairment of Synaptic Plasticity in a Mouse Model of NPC Disease. Neural Plast. 2016:2016:3830424.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA