UDP-GlcNAc disodium

Cat. No.: HY-112174

CAS No.: 91183-98-1

Molecular Formula: $C_{17}H_{25}N_3Na_2O_{17}P_2$

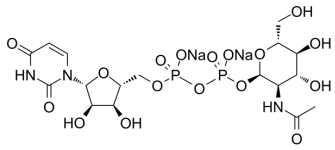
Molecular Weight: 651.32

Target: Others

Pathway: Others

Storage: -20°C, sealed storage, away from moisture

* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (383.84 mM; Need ultrasonic)

H_2O : 125 mg/mL (191.92 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.5353 mL	7.6767 mL	15.3534 mL
5 mM	0.3071 mL	1.5353 mL	3.0707 mL
10 mM	0.1535 mL	0.7677 mL	1.5353 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: ≥ 2.08 mg/mL (3.19 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.19 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.19 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

UDP-GlcNAc Disodium Salt (UDP-α-D-N-Acetylglucosamine Disodium Salt) is a donor substrate of O-GlcNAc transferase (OGT).

In Vitro

OGT is a nucleocytoplasmic glycosyltransferase (uridine diphospho-N--acetylglucosamine:polypeptide β-N-acetylglucosaminyltransferase or O-GlcNAc transferase) assigned to the GT41 family in the CAZY (Carbohydrate-Active enZYme) database. Using UDP-GlcNAc Disodium Salt (UDP-GlcNAc) as the donor substrate, this enzyme modifies thousands of proteins by adding a unique N-acetylglucosamine residue onto acceptor substrates mainly confined within cytosol and nucleus[1].

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

CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2023 Feb 10;8(1):63.
- Int J Biol Sci. 2022 Jun 21;18(10):4135-4150.
- Laurea Magistrale in Biomedical Engineering, Politecnico di Milano. 2019 Jun.

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REFERENCES

[1]. Lefebvre T, et al. Antibodies and activity measurements for the detection of O-GlcNAc transferase and assay of its substrate, UDP-GlcNAc. Methods Mol Biol. 2013;1022:147-59.

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