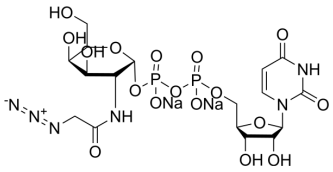
UDP-GalNAz disodium

Cat. No.:	HY-145934
CAS No.:	653600-61-4
Molecular Formula:	$C_{17}H_{24}N_6Na_2O_{17}P_2$
Molecular Weight:	692.33
Target:	Others
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (144.44 mM; ultrasonic and warming and heat to 60°C)

H_2O : 100 mg/mL (144.44 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.4444 mL	7.2220 mL	14.4440 mL
5 mM	0.2889 mL	1.4444 mL	2.8888 mL
10 mM	0.1444 mL	0.7222 mL	1.4444 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: ≥ 2.5 mg/mL (3.61 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.61 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.61 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

UDP-GalNAz disodium (UDP-N-azidoacetylgalactosamine disodium) is the analogue of UDP-GalNAc. UDP-GalNAc is the donor substrate of many N-acetylgalactosaminyltransferases, enzymes which transfer GalNAc from the nucleotide sugar to a saccharide or peptide acceptor[1]. UDP-GalNAz (disodium) is a click chemistry reagent, itcontains an Azide group and can undergo copper-catalyzed azide-alkyne cycloaddition reaction (CuAAc) with molecules containing Alkyne groups. Strain-promoted alkyne-azide cycloaddition (SPAAC) can also occur with molecules containing DBCO or BCN groups.

REFERENCES

[1]. Hang HC, et al. Probing glycosyltransferase activities with the Staudinger ligation. J Am Chem Soc. 2004;126(1):6-7.

[2]. Bourgeaux V, et al. Two-step enzymatic synthesis of UDP-N-acetylgalactosamine. Bioorg Med Chem Lett. 2005;15(24):5459-5462.

[3]. Hang HC, et al. A metabolic labeling approach toward proteomic analysis of mucin-type O-linked glycosylation. Proc Natl Acad Sci U S A. 2003;100(25):14846-14851. doi:10.1073/pnas.2335201100

[4]. Lo PW, et al. O-GlcNAcylation regulates the stability and enzymatic activity of the histone methyltransferase EZH2. Proc Natl Acad Sci U S A. 2018;115(28):7302-7307.

[5]. Vanessa Bourgeaux, et al. Two-step enzymatic synthesis of UDP-N-acetylgalactosamine. Bioorg Med Chem Lett. 2005 Dec 15;15(24):5459-62.

Caution: Product has not been fully validated for medical applications. For research use only.

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