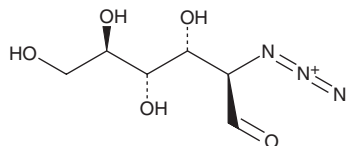


PRODUCT INFORMATION

2-Azido-2-deoxy-D-glucose

Item No. 46553

CAS Registry No.: 56883-39-7
Synonyms: 2-Deoxy-2-azido-D-glucose, GlcAz, GlucN₃
MF: C₆H₁₁N₃O₅
FW: 205.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2-Azido-2-deoxy-D-glucose is supplied as a solid. A stock solution may be made by dissolving the 2-azido-2-deoxy-D-glucose in the solvent of choice, which should be purged with an inert gas. 2-Azido-2-deoxy-D-glucose is slightly soluble (0.1-1 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 2-azido-2-deoxy-D-glucose can be prepared by directly dissolving the solid in aqueous buffers. 2-Azido-2-deoxy-D-glucose is sparingly soluble PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

2-Azido-2-deoxy-D-glucose is a click chemistry reagent and derivative of 2-deoxy-D-glucose (Item No. 14325).^{1,2} It has been used as a pretargeting agent in a murine Sarcoma 180 model, where it increases tumor uptake of the radiolabeled probe [^{99m}Tc(CO)₃-C7] via an *in vivo* strain-promoted alkyne-azide cycloaddition (SPAAC) reaction.¹ When conjugated to UDP, 2-azido-2-deoxy-D-glucose acts as a donor substrate for O-linked N-acetylglucosamine transferase (OGT) and can be incorporated into OGT substrates.²

References

1. Ding, J., Su, H., Wang, F., *et al.* A pre-targeting strategy for imaging glucose metabolism using technetium-99m labelled dibenzocyclooctyne derivative. *Bioorg. Med. Chem. Lett.* **29**(14), 1791-1798 (2019).
2. Shen, D.L., Liu, T.W., Zandberg, W., *et al.* Catalytic promiscuity of O-GlcNAc transferase enables unexpected metabolic engineering of cytoplasmic proteins with 2-azido-2-deoxy-glucose. *ACS Chem. Biol.* **12**(1), 206-213 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM