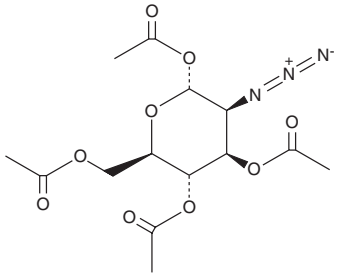
PRODUCT INFORMATION

1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-α-D-Mannopyranose

Item No. 30542

CAS Registry No.: 68733-20-0
Formal Name: 2-azido-2-deoxy-α-D-mannopyranose, 1,3,4,6-tetraacetate
MF: $C_{14}H_{19}N_3O_9$
FW: 373.3
Purity: ≥95%
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

1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose is supplied as a solid. A stock solution may be made by dissolving the 1,3,4,6-tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose in the solvent of choice, which should be purged with an inert gas. 1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of 1,3,4,6-tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose in these solvents is approximately 15 and 30 mg/ml, respectively.

1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1,3,4,6-tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-α-D-mannopyranose is an analog of N-acetylmannosamine (ManNAc) and a building block.[1,2] It has been used as a precursor in the synthesis of differently substituted trimers of the group A *N. meningitidis* capsular polysaccharide repeating unit for use in immunological experiments.[2] It has also been used in the synthesis of fluorescent probes for lysosomal labeling.[3]

References

1. Saxon, E., Luchansky, S.J., Hang, H.C., *et al.* Investigating cellular metabolism of synthetic azidosugars with the Staudinger ligation. *J. Am. Chem. Soc.* **124(50)**, 14893-14902 (2002).
2. Slättegård, R., Teodorovic, P., Kinfe, H.H., *et al.* Synthesis of structures corresponding to the capsular polysaccharide of *Neisseria meningitidis* group A. *Org. Biomol. Chem.* **3(20)**, 3782-3787 (2005).
3. Yapici, N.B., Bi, Y., Li, P., *et al.* Highly stable and sensitive fluorescent probes (LysoProbes) for lysosomal labeling and tracking. *Sci. Rep.* **5**, 8576 (2015).

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