

**Product Name:** Ac<sub>4</sub>ManNAz

**Catalog No.:** 7479

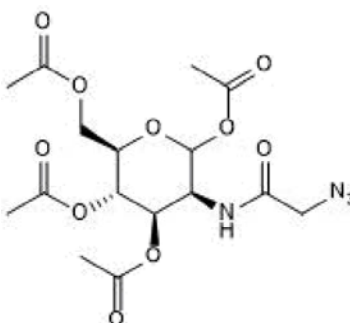
**Batch No.:** 1

CAS Number: 361154-30-5

IUPAC Name: 2-[(2-Azidoacetyl)amino]-2-deoxy-D-mannopyranose-1,3,4,6-tetraacetate

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>16</sub>H<sub>22</sub>N<sub>4</sub>O<sub>10</sub>  
**Batch Molecular Weight:** 430.37  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.2% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 44.65  | 5.15     | 13.02    |
| Found       | 44.83  | 5.17     | 13.02    |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

Ac<sub>4</sub>ManNAz is a cell-permeable, unnatural azide-containing monosaccharide building block. Ac<sub>4</sub>ManNAz is metabolized and incorporated as azidosialic acid into cell surface and secreted sialoglycoproteins to allow Cu(I)-free click chemistry for further conjugation or detection. Ac<sub>4</sub>ManNAz can be used for bioorthogonal labeling of human prostate tissue slice cultures; the target sialoglycoproteins can be biotinylated for proteomic analysis or reacted with a cyclooctyne-functionalized optical probe for imaging. Ac<sub>4</sub>ManNAz is also used to label glycoRNAs on the cell surface.

**Physical and Chemical Properties:**

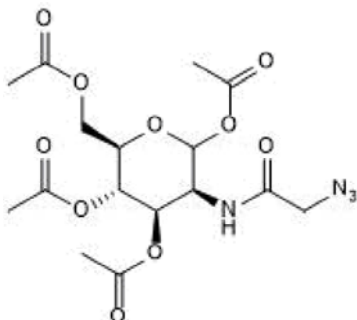
Batch Molecular Formula: C<sub>16</sub>H<sub>22</sub>N<sub>4</sub>O<sub>10</sub>.

Batch Molecular Weight: 430.37

Physical Appearance: White solid

**Minimum Purity:** ≥95%

**Batch Molecular Structure:**



**References:**

**Flynn et al** (2021) Small RNAs are modified with N-glycans and displayed on the surface of living cells. *Cell* **184** 3109. PMID: 34004145.

**Zhu et al** (2021) Coupling aptamer-based protein tagging with metabolic glycan labeling for *in situ* visualization and biological function study of exosomal protein-specific glycosylation. *Angew.Chem.Int.Ed.Engl.* **60** 18111. PMID: 34043264.

**Shajahan et al** (2017) Carbohydrate-neuroactive hybrid strategy for metabolic glycan engineering of the central nervous system *in vivo*. *J.Am.Chem.Soc.* **139** 693. PMID: 27997162.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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