

Product Name: Click *N*-Acetylmuramic acid - azide

Catalog No.: 7506

Batch No.: 1

CAS Number: 2245794-64-1

IUPAC Name: (2*R*)-2-(((3*R*,4*R*,5*S*,6*R*)-3-(2-Azidoacetamido)-2,5-dihydroxy-6-(hydroxymethyl)tetrahydro-2*H*-pyran-4-yl)oxy)propanoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₁₈N₄O₈

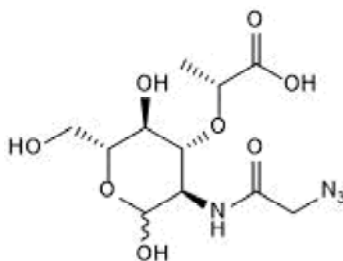
Batch Molecular Weight: 334.29

Physical Appearance: Off White solid

Solubility: water to 5 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.0% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

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

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Description:

Click N-Acetylmuramic acid-azide is a derivative of the N-acetylmuramic acid (NAM) component of bacterial peptidoglycans. Incorporated into bacterial peptidoglycans during biosynthesis. Suitable for fluorescent labeling of peptidoglycans when "click'-conjugated to a fluorescent dye.

Physical and Chemical Properties:

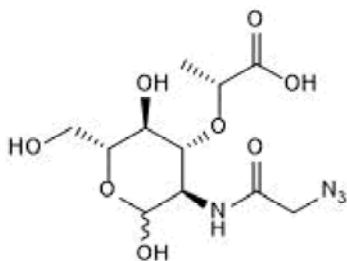
Batch Molecular Formula: C₁₁H₁₈N₄O₈

Batch Molecular Weight: 334.29

Physical Appearance: Off White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

water to 5 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.

Licensing Information:

Sold under license from the University of Delaware

References:

Wodzanowski et al (2022) Multiscale invasion assay for probing macrophage response to gram-negative bacteria. *Front.Chem.* **10** 842602. PMID: 35242744.

Taylor et al (2021e) Localizing peptidoglycan synthesis in helicobacter pylori using clickable metabolic probes. *Curr.Protoc.* **1** e80. PMID: 33844460.

Wodzanowski et al (2020) Tools for probing host-bacteria interactions in the gut microenvironment: from molecular to cellular levels. *Bioorg.Med.Chem.Lett.* **30** 127116. PMID: 32223923.

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