Certificate of Analysis

Product Name: **$Ac_4GlcNAlk$** **Catalog No.: 7750** **Batch No.: 1**

CAS Number: 1361993-37-4

IUPAC Name: 2-Deoxy-2-[(1-oxo-4-pentyn-1-yl)amino]-D-glucopyranose-1,3,4,6-tetraacetate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{25}NO_{10}$

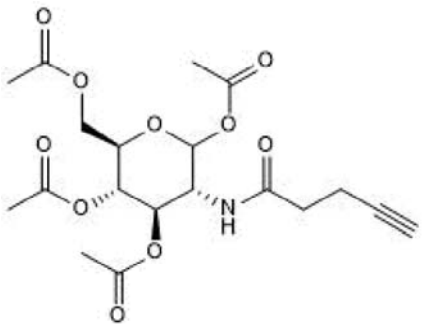
Batch Molecular Weight: 427.41

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

^1H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.39	5.9	3.28
Found	53.47	5.95	3.23

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Product Name: **$Ac_4GlcNAlk$** **Catalog No.: 7750** **1**

CAS Number: 1361993-37-4

IUPAC Name: 2-Deoxy-2-[(1-oxo-4-pentyn-1-yl)amino]-D-glucopyranose-1,3,4,6-tetraacetate

Description:

$Ac_4GlcNAlk$ is a metabolic chemical reporter (MCR) for studying cell surface glycosylation. It is used for identification of O-GlcNAc modified proteins. In cells expressing the engineered pyrophosphorylase, mut-AGX1, $Ac_4GlcNAlk$ is efficiently converted into UDP-GlcNAlk which is incorporated into GlcNAlk-containing glycoproteins.

Physical and Chemical Properties:

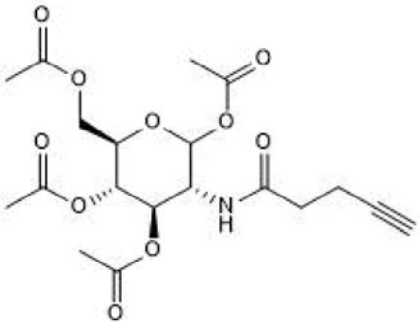
Batch Molecular Formula: $C_{19}H_{25}NO_{10}$

Batch Molecular Weight: 427.41

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



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.

References:

Cioce *et al* (2021) Optimization of metabolic oligosaccharide engineering with $Ac_4GalNAlk$ and $Ac_4GlcNAlk$ by an engineered pyrophosphorylase. ACS Chem.Biol. ***16*** 1961. PMID: 33835779.