

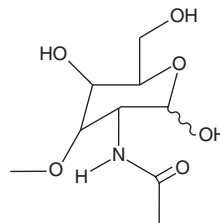
# PRODUCT INFORMATION



## 3-O-methyl-N-acetyl-D-Glucosamine

Item No. 10011056

**CAS Registry No.:** 94825-74-8  
**Formal Name:** 2-(acetylamino)-2-deoxy-3-O-methyl-D-glucose  
**Synonym:** 3-O-methyl-GlcNAc  
**MF:** C<sub>9</sub>H<sub>17</sub>NO<sub>6</sub>  
**FW:** 235.2  
**Purity:** ≥95%  
**Supplied as:** A crystalline 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

3-O-methyl-N-acetyl-D-Glucosamine (3-O-methyl-GlcNAc) is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-O-methyl-GlcNAc in the solvent of choice, which should be purged with an inert gas. 3-O-methyl-GlcNAc is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 3-O-methyl-GlcNAc in these solvents is approximately 30 mg/ml.

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 3-O-methyl-GlcNAc can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3-O-methyl-GlcNAc in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

3-O-methyl-GlcNAc is a competitive inhibitor of N-acetylglucosamine kinase and a non-competitive inhibitor of N-acetylmannosamine kinase ( $K_s = 17$  and  $80 \mu\text{M}$  in rat liver, respectively, *in vitro*).<sup>1</sup>

### Reference

1. Zeitler, R., Giannis, A., Danneschewski, S., *et al.* Inhibition of N-acetylglucosamine kinase and N-acetylmannosamine kinase by 3-O-methyl-N-acetyl-D-glucosamine *in vitro*. *Eur. J. Biochem.* **204**(3), 1165-1168 (1992).

#### 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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