

# PRODUCT INFORMATION



## N-Acetylmuramic Acid

Item No. 31330

CAS Registry No.: 10597-89-4

Synonym: MurNAc

MF:  $C_{11}H_{19}NO_8$

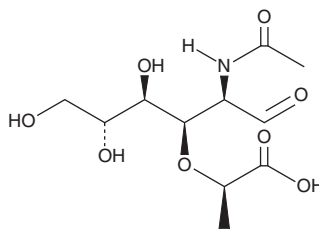
FW: 293.3

Purity:  $\geq 95\%$

Supplied as: A solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

N-Acetylmuramic acid (MurNAc) is supplied as a solid. A stock solution may be made by dissolving the MurNAc in the solvent of choice, which should be purged with an inert gas. MurNAc is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of MurNAc in these solvents is approximately 30 and 2.5 mg/ml, respectively.

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 MurNAc can be prepared by directly dissolving the solid in aqueous buffers. The solubility of MurNAc in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

MurNAc is a component of the glycan strands in bacterial peptidoglycan.<sup>1</sup> It is linked to N-acetylglucosamine (GlcNAc) by  $\beta$ -1,4 linkages in an alternating pattern, as well as to the peptide side chains via its lactyl side chain, in native peptidoglycan.

### Reference

1. Bugg, T.D.H. Bacterial peptidoglycan biosynthesis and its inhibition. *Comprehensive natural products chemistry*. Barton, D., Nakanishi, K., and Meth-Cohn, O., editors, 1<sup>st</sup> edition, Elsevier Science (1999).

#### 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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