

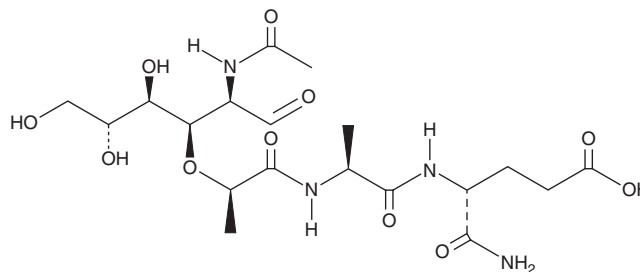
PRODUCT INFORMATION



Muramyl Dipeptide

Item No. 30866

CAS Registry No.: 53678-77-6
Formal Name: N-(N-acetylmuramoyl)-L-alanyl-D- α -glutamine
Synonyms: MDP, N-Acetylmuramoyl dipeptide
MF: C₁₉H₃₂N₄O₁₁
FW: 492.5
Purity: \geq 95% (mixture of anomers)
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Muramyl dipeptide (MDP) is supplied as a solid. A stock solution may be made by dissolving the MDP in water. The solubility of MDP in water is approximately 40 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

MDP is a ligand for nucleotide-binding oligomerization domain-containing 2 (NOD2) and a breakdown product of bacterial cell wall peptidoglycan.¹ MDP binds to NOD2 to induce NF- κ B signaling and the production of pro-inflammatory cytokines, chemokines, and antimicrobial peptides. It has been used as an adjuvant to enhance non-specific immunity to bacterial infections in mice.^{1,2}

References

1. Ogawa, C., Liu, Y.-J., and Kobayashi, K.S. Muramyl dipeptide and its derivatives: Peptide adjuvant in immunological disorders and cancer therapy. *Curr. Bioact. Compd.* **7(3)**, 180-197 (2011).
2. Chedid, L., Parant, M., Lefrancher, P., *et al.* Enhancement of nonspecific immunity to *Klebsiella pneumoniae* infection by a synthetic immunoadjuvant (N-acetylmuramyl-L-alanyl-D-isoglutamine) and several analogs. *Proc. Natl. Acad. Sci. U.S.A.* **74(5)**, 2089-2093 (1977).

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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