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Product Information

Peptidoglycan from *Micrococcus luteus*

Catalog Number **53243**
Storage Temperature –20 °C

Product Description

Many bacteria contain in their cell walls a unique biopolymer, peptidoglycan, which lends rigidity to the cell wall and mechanical strength to the cell. Cell walls of Gram-positive bacteria are primarily composed of peptidoglycan, and can contain up to 40 layers of this polymer, which underlies the great mechanical strength of the cell wall. The core structure of peptidoglycan is a carbohydrate backbone of alternating units of *N*-acetyl-glucosamine (Glc*N*Ac) and *N*-acetyl muramic acid (Mur*N*Ac), linked by β(1→4) bonds. The Mur*N*Ac residues are crosslinked with oligopeptides. A unique aspect of peptidoglycans is that they contain D-amino acids, e.g. D-Ala and D-Glu, the only known biological molecule that contains D-amino acids.[1,2]

Various publications have studied structural features of the *Micrococcus luteus* cell wall peptidoglycan.[3-13] Several publications cite use of this specific product in different applications and systems, including zymography,[14] protein-binding studies,[15] and studies on *Hymenoptera*,[16] *Drosophila*,[17] *Manduca sexta* (tobacco hornworm),[18] and various coronaviruses.[19]

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

In general, peptidoglycans cannot be readily solubilized. Instead, suspensions of peptidoglycans can be prepared in aqueous media. One publication reports general preparation of suspensions of this product in PBS and storing the suspensions at –20 °C.[19] However, we have not tested these conditions ourselves.

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