

Staphylococcus aureus peptidoglycan(PG)

Cat. No. COP31 Lot. No. (See product label)

SPECIFICATION

Product Overview

Description

This purified peptidoglycan was obtained from cell wall fragments using a sonication and differential centrifugation based procedure. The preparation has been treated with heat, acid, and various enzymes to eliminate or minimize other biomolecules which may have been present. The final product is lyophilized, packaged under vacuum and contains residual NaCl (0.15 M - when rehydrated to 1 mg STPG/ml with deionized water).

Solubility

After lyophilization, the STPG was re-dissolved to a 1 mg/ml solution using deionized water. This solution was uniformly hazy. This solution was sonicated then centrifuged at 3000 rpm for 10 minutes. No sediment was observed and the haziness remained in solution.

Storage and handling

After re-hydration, solution should be re-sonicated to break up peptidoglycan which may have re-aggregated. This also makes the PG more mitogenically active. PG solution may be stored frozen at -20 oC for up to one year but should be re-sonicated after thawing. Storage at 4 oC should not exceed one week.

BACKGROUND

Introduction

Peptidoglycan, also known as murein, is a polymer consisting of sugars and amino acids that forms a mesh-like layer outside the plasma membrane of bacteria, forming the cell wall. The sugar component consists of alternating residues of β -(1,4) linked N-acetylglucosamine and N-acetylmuramic acid. Attached to the N-acetylmuramic acid is a peptide chain of three to five amino acids. The peptide chain can be cross-linked to the peptide chain of another strand forming the 3D mesh-like layer.

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Keywords

Peptidoglycan; PG

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