Native S. aureus PGN Protein

Cat. No. PGN-17S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	PGN-SA is a peptidoglycan (PGN) preparation from the Gram-positive bacterium Staphylococcus aureus.
Species	S.aureus
Description	PGN, a major component of the bacterial cell wall, is a large polymeric molecule made of glycan strands connected by short peptides. It is mainly single-layered in Gram-negative bacteria (e.g. E. coli) and multi-layered in Gram-positive bacteria (e.g. B. subtilis). The structure of PGN varies among bacterial species at both the level of sugar polymers and of cross-linked amino-acids. In Gram-positive bacteria, the amino-acid side chain structure consists of L-alanine, D-glutamate, L-lysine, and D-alanine, whereas n Gram-negative bacteria, the L-Lysine is replaced by meso-diaminopimelic acid (mDAP or meso-DAP). PGN, either intact or fragmented, is sensed by the innate immune system through different PRRs (pattern recognition receptors). PGN is known to be a potent activator of NF-κB and TNF-α through TLR2, although it has been reported that PGN agonistic activity for TLR2 is likely relying on other commonly co-purified molecules, such as cell wall lipoproteins and lipoteichoic acids (LTAs). The role of TLR2 in the direct recognition of PGN remains controversial, and the discrepancies among studies may arise from the purification methods as well as from the variation in PGN structure in the different bacterial species.
Quality Control Test	The biological activity of PGN-SA has been verified using HEK-Blue hTLR2 cells. The presence of bacterial endotoxins is assessed using HEK-Blue hTLR4 cells.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Storage	Upon receipt, store at -20 centigrade. Alert Avoid repeated freeze-thaw cycles.
Shipping	Shipped at room temperature

GENE INFORMATION

Official Symbol	PGN
Synonyms	peptidoglycan; PGN

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA