

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Gln22-Pro196, with a C-terminal 6-His tag
Accession # O75594

N-terminal Sequence Analysis No results obtained: Gln22 predicted

Predicted Molecular Mass 20.2 kDa

SPECIFICATIONS

SDS-PAGE 25 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When peptidoglycan is coated at 1 µg/mL (100 µL/well), the concentration of Recombinant Human PGLYRP1/PGRP-S that produces 50% optimal binding response is typically 0.75-4.5 ng/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The human PGRP family is comprised of four peptidoglycan recognition proteins that may function as innate immunity pattern recognition molecules (1, 2). Termed PGRP-L, PGRP-Iα, PGRP-Iβ and PGRP-S, they are all products of separate genes, and all are named for the relative length of their translated product (3). PGRP-L (for long) is 576 amino acids (aa) in length, while PGRP-Iα and Iβ are (I) intermediate in length at 341 aa and 373 aa, respectively, and PGRP-S is the shortest at 196 aa in length (3, 4). All human PGRPs bind peptidoglycan and Gram-positive bacteria, and all have at least three C-terminal PGRP domains at variable sites that are highly conserved from insects to mammals (3). Human PGRP-S, the first described member of the family, is a 28 kDa secreted glycoprotein associated with neutrophils (4). The mature molecule is 175 aa in length and contains three variably-sized peptide-carbohydrate recognition sequences of 15 aa, 29 aa and 49 aa, respectively. Human PGRP-S is 72%, 71% and 70% aa identical to mouse, bovine and rat mature PGRP-S, respectively. Studies with PGRP-S deficient mice indicate that knock-out mice have increased susceptibility to infections with non-pathogenic bacteria. Neutrophils from knock-out mice exhibit normal phagocytosis of bacteria but are defective in intracellular killing and digestion of nonpathogenic bacteria (5). The longer three PGRP members are all membrane-bound molecules that contain two membrane-spanning segments. Both the N- and C-termini are depicted as being extracellular with a joining cytoplasmic domain. All three transmembrane forms show at least one PGRP domain on the C-terminal extracellular region; other PGRP domains are variably distributed over their two extracellular and one cytoplasmic region (3).

References:

1. Girardin, S.E. and D.J. Philpott (2004) *Eur. J. Immunol.* **34**:1777.
2. Steiner, H. (2004) *Immunol. Rev.* **198**:83.
3. Liu, C. *et al.* (2001) *J. Biol. Chem.* **276**:34686.
4. Kang, D. *et al.* (1998) *Proc. Natl. Acad. Sci. USA* **95**:10078.
5. Dziarski, R. *et al.* (2003) *Blood* **102**:689.