

PGLYRP1 Protein, Human, Recombinant (His)

General Information

Synonyms:	PGRP-S;PGLYRP;PGRP;TAG7;UNQ639/PRO1269;TNFSF3L;SBBI68;PGRPS
Protein Construction:	Gln22-Pro196
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O75594
Molecular Weight:	21.04 kDa (predicted); 27-37 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Human TREM1, His Tag immobilized on CM5 Chip can bind Human PGLYRP1, His Tag with an affinity constant of 0.54 μM as determined in SPR assay (Biacore T200).
Purity:	> 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 $\mu\text{g}/\text{ml}$. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C . For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Peptidoglycan recognition protein 1, also known as Peptidoglycan recognition protein short, PGRP-S, PGLYRP1, PGLYRP, PGRP and TNFSF3L, is a secreted protein that belongs to the N-acetylmuramoyl-L-alanine amidase 2 family. PGLYRP1 / PGLYRP is highly expressed in bone marrow. It is weakly expressed in kidney, liver, small intestine, spleen, thymus, peripheral leukocyte, lung, fetal spleen and neutrophils. PGLYRP1 / PGLYRP is a pattern receptor that binds to murein peptidoglycans (PGN) of Gram-positive bacteria. It has bactericidal activity towards

Gram-positive bacteria. PGLYRP1 / PGLYRP may kill Gram-positive bacteria by interfering with peptidoglycan biosynthesis. It binds also to Gram-negative bacteria, and has bacteriostatic activity towards Gram-negative bacteria. Peptidoglycan recognition proteins (PGRPs or PGLYRPs) are innate immunity proteins that are conserved from insects to mammals, recognize bacterial peptidoglycan, and function in antibacterial immunity and inflammation. Mammals have four PGRPs: PGLYRP1, PGLYRP2, PGLYRP3, and PGLYRP4. They are secreted proteins expressed in polymorphonuclear leukocytes (PGLYRP1), liver (PGLYRP2), or on body surfaces, mucous membranes, and in secretions (saliva, sweat) (PGLYRP3 and PGLYRP4). All PGRPs recognize bacterial peptidoglycan. The PGRPs likely play a role both in antibacterial defenses and several inflammatory diseases. They modulate local inflammatory responses in tissues (such as arthritic joints) and there is evidence for association of PGRPs with inflammatory diseases, such as psoriasis.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481