Data Sheet (Cat.No.TMPY-02163)

TargetMol

PGLYRP1 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Tnfsf3l;peptidoglycan recognition protein 1;PGRP;Tasg7;Tag7;PGRP-S;Pglyrp
Protein Construction:	A DNA sequence encoding the mouse PGLYRP (O88593) (Met 1-Glu 182) was expressed, with a C-terminal polyhistidine tag Predicted N terminal: Phe 19
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	O88593
Molecular Weight:	20.2 kDa (predicted); 18-21 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from PBS, pH 7.4, 10% glycerol. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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.

Reference

Kang D., et al.,(1998), A peptidoglycan recognition protein in innate immunity conserved from insects to humans. Proc. Natl. Acad. Sci. U.S.A. 95:10078-10082.

Liu C., et al., (2001), Peptidoglycan recognition proteins: a novel family of four human innate immunity pattern recognition molecules.J. Biol. Chem. 276:34686-34694.

Clark H.F., et al.,(2003), The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment.Genome Res. 13:2265-2270.