

Recombinant Rat PGRP1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52586

Size: 10ug, 100ug

Protein Name: Peptidoglycan recognition protein 1 (Peptidoglycan recognition protein short) (PGRP-S)

Synonym: Pglyrp1, Pglyrp, Pgrp

UniProt ID: Q9JLN4

UniProt Link: www.uniprot.org/uniprotkb/Q9JLN4/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 183 AA

Molecular Weight: 21 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLFAWAPFPALLGLADSCCFVVRSEWKALPSECSKGLKKPVRYVVISHTAGSFCSSPDSCEQQAR
NVQLYQMKQLGWCDVAYNFLIGEDGHVYEGRGWTIKGDHTGPIWNPMSIGITFMGDYSHRVPAKR
ALRAALNLLKCGVSEGFLRSNYEVKGHRDVQSTLSPGDQLYEIIQSWDHYRE

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Peptidoglycan recognition protein 1 (Peptidoglycan recognition protein short) (PGRP-S) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Innate immunity protein that plays several important functions in antimicrobial and antitumor defense systems. Acts as a pattern receptor that binds to murein peptidoglycans (PGN) of Gram-positive bacteria and thus provides bactericidal activity. Forms an equimolar complex with heat shock protein HSPA1A and induces programmed cell death through apoptosis and necroptosis in tumor cell lines by activating the TNFR1 receptor on the target cell membrane. In addition, acts in complex with the Ca(2+)-binding protein S100A4 as a chemoattractant able to induce lymphocyte movement. Mechanistically, this complex acts as a ligand of the chemotactic receptors CCR5 and CXCR3 which are present on the cells of the immune system. Promotes also the activation of lymphocytes that become able to kill virus-infected cells as well as tumor cells by modulating the spectrum of their target-cell specificity. Induction of cytotoxicity on monocyte surface requires interaction with TREM1 receptor.

Subcellular Localization: Secreted . Cytoplasmic granule .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.