SANTA CRUZ BIOTECHNOLOGY, INC.

PGRP-S (H-80): sc-50472

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Peptidoglycan recognition proteins (PGRPs) are molecules that recognize peptidoglycan, a large component in bacterial cell walls. In insects, PGRPs activate antimicrobial pathways, and in mammals PGRPs function as antibacterial neutrophil proteins. PGRP-L halts bacterial growth by acting as an alanine amidase, an enzyme that hydrolyzes the amide bond of bacterial peptidoglycan. PGRP-Iα and PGRP-Iβ are also members of the PGRP family that help recognize bacteria by binding to peptidoglycan and gram-positive bacteria, but they do not have amidase activity. PGRP-S participates in intracellular killing of gram-positive bacteria by stimulating two antimicrobial defense systems, the prophenoloxidase cascade and the antimicrobial peptides, through Toll receptors.

REFERENCES

1. 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.
2. Dziarski, R., et al. 2003. Defect in neutrophil killing and increased susceptibility to infection with nonpathogenic gram-positive bacteria in peptidoglycan recognition protein S (PGRP-S)-deficient mice. Blood 102: 689-697.
3. Kibardin, A.V., et al. 2003. Expression analysis of proteins encoded by genes of the tag7/tagL (PGRP-S,L) family in human peripheral blood cells. Genetika 39: 244-249.
4. Lo, D., et al. 2003. Peptidoglycan recognition protein expression in mouse Peyer's Patch follicle associated epithelium suggests functional specialization. Cell. Immunol. 224: 8-16.
5. Wang, Z.M., et al. 2003. Human peptidoglycan recognition protein L is an N-acetylmuramoyl-L-alanine amidase. J. Biol. Chem. 278: 49044-49052.
6. Cho, J.H., et al. 2005. Human peptidoglycan recognition protein S is an effector of neutrophil-mediated innate immunity. Blood 106: 2551-2558.
7. Guan, R., et al. 2005. Crystal structure of human peptidoglycan recognition protein S (PGRP-S) at 1.70 A resolution. J. Mol. Biol. 347: 683-691.

CHROMOSOMAL LOCATION

Genetic locus: PGLYRP1 (human) mapping to 19q13.32.

SOURCE

PGRP-S (H-80) is a rabbit polyclonal antibody raised against amino acids 96-175 mapping within an internal region of PGRP-S of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PGRP-S (H-80) is recommended for detection of PGRP-S of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PGRP-S siRNA (h): sc-62790, PGRP-S shRNA Plasmid (h): sc-62790-SH and PGRP-S shRNA (h) Lentiviral Particles: sc-62790-V.

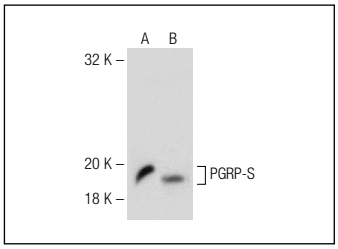
Molecular Weight of PGRP-S: 22 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HEL 92.1.7 cell lysate: sc-2270.

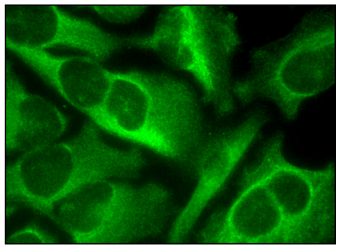
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PGRP-S (H-80): sc-50472. Western blot analysis of PGRP-S expression in Jurkat (**A**) and HEL 92.1.7 (**B**) whole cell lysates.



PGRP-S (H-80): sc-50472. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS7

See our web site at www.scbt.com or our catalog for detailed protocols and support products.