

PGRP-S (G-1): sc-365304



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 anti-bacterial neutrophil proteins. PGRP-L halts bacterial growth by acting as an alanine amidase, an enzyme that hydrolyzes the amide bond of bacterial peptidoglycan. PGRP- α and PGRP- β 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

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- 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.
- 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.
- 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.
- Wang, Z.M., et al. 2003. Human peptidoglycan recognition protein-L is an N-acetylmuramoyl-L-alanine amidase. *J. Biol. Chem.* 278: 49044-49052.
- Cho, J.H., et al. 2005. Human peptidoglycan recognition protein S is an effector of neutrophil-mediated innate immunity. *Blood* 106: 2551-2558.

CHROMOSOMAL LOCATION

Genetic locus: Pglyrp1 (mouse) mapping to 7 A3.

SOURCE

PGRP-S (G-1) is a mouse monoclonal antibody raised against amino acids 123-182 mapping at the C-terminus of PGRP-S of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PGRP-S (G-1) is available conjugated to agarose (sc-365304 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365304 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365304 PE), fluorescein (sc-365304 FITC), Alexa Fluor[®] 488 (sc-365304 AF488), Alexa Fluor[®] 546 (sc-365304 AF546), Alexa Fluor[®] 594 (sc-365304 AF594) or Alexa Fluor[®] 647 (sc-365304 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365304 AF680) or Alexa Fluor[®] 790 (sc-365304 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PGRP-S (G-1) is recommended for detection of PGRP-S of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 (m): sc-62791, PGRP-S shRNA Plasmid (m): sc-62791-SH and PGRP-S shRNA (m) Lentiviral Particles: sc-62791-V.

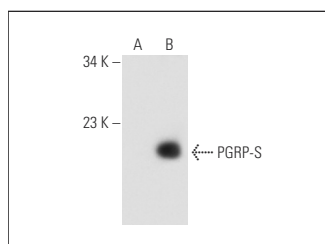
Molecular Weight of PGRP-S: 22 kDa.

Positive Controls: PGRP-S (m): 293T Lysate: sc-127321.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



PGRP-S (G-1): sc-365304. Western blot analysis of PGRP-S expression in non-transfected: sc-117752 (A) and mouse PGRP-S transfected: sc-127321 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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

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