

PGRP-L (H-300): sc-50470

BACKGROUND

Peptidoglycan recognition protein-L (PGRP-L) is a pattern recognition molecule consisting of 576 amino acid residues. It is the longest and most widely expressed member of the PGRP family. PGRP-L is a Zn²⁺-dependent protein with N-acetylmuramyl-L-alanine-amidase activity that digests peptidoglycan. PGRP-L can form a homodimer and may dimerize with other PGRP proteins. It is a secreted serum protein but is also expressed as a transmembrane protein in liver parenchymal cells binding peptidoglycan and Gram-positive bacteria. PGRP-L deficient mice exhibit slightly lower levels of IL-6 and TNF α but exhibit no obvious phenotypic abnormalities. This suggests that PGRP-L may play a minor role in innate immune functions. In addition, PGRP-L may be a key player in the activation of Nod1, an intracellular pattern recognition protein.

REFERENCES

- Schenck, J.F., et al. 1992. Human exposure to 4.0-Tesla magnetic fields in a whole-body scanner. *Med. Phys.* 19: 1089-1098.
- 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.
- Girardin, S.E., et al. 2003. Peptidoglycan molecular requirements allowing detection by Nod1 and Nod2. *J. Biol. Chem.* 278: 41702-41708.
- Wang, Z.M., et al. 2003. Human peptidoglycan recognition protein-L is an N-acetylmuramoyl-L-alanine amidase. *J. Biol. Chem.* 278: 49044-49052.
- Liepinsh, E., et al. 2003. NMR structure of *Citrobacter freundii* AmpD, comparison with bacteriophage T7 lysozyme and homology with PGRP domains. *J. Mol. Biol.* 327: 833-842.
- 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.
- Xu, M., et al. 2004. Innate immune responses in peptidoglycan recognition protein L-deficient mice. *Mol. Cell. Biol.* 24: 7949-7957.
- Uehara, A., et al. 2005. Chemically synthesized pathogen-associated molecular patterns increase the expression of peptidoglycan recognition proteins via Toll-like receptors, Nod1 and Nod2 in human oral epithelial cells. *Cell. Microbiol.* 7: 675-686.
- Bischoff, V., et al. 2006. Downregulation of the *Drosophila* immune response by peptidoglycan-recognition proteins SC1 and SC2. *PLoS Pathog.* 2: E14.

CHROMOSOMAL LOCATION

Genetic locus: PGLYRP2 (human) mapping to 19p13.12; Pglyrp2 (mouse) mapping to 17 B1.

SOURCE

PGRP-L (H-300) is a rabbit polyclonal antibody raised against amino acids 22-321 mapping near the N-terminus of PGRP-L of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

PGRP-L (H-300) is recommended for detection of PGRP-L of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, 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).

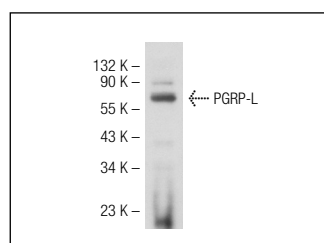
Suitable for use as control antibody for PGRP-L siRNA (h): sc-62788, PGRP-L siRNA (m): sc-62789, PGRP-L shRNA Plasmid (h): sc-62788-SH, PGRP-L shRNA Plasmid (m): sc-62789-SH, PGRP-L shRNA (h) Lentiviral Particles: sc-62788-V and PGRP-L shRNA (m) Lentiviral Particles: sc-62789-V.

Molecular Weight of PGRP-L: 74 kDa.

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-L (H-300): sc-50470. Western blot analysis of PGRP-L expression in mouse liver tissue extract.

STORAGE

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

PROTOCOLS

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