

PR3 (H-8): sc-74533

BACKGROUND

The major features of Wegener granulomatosis are necrotizing granulomatous lesions, which most often affect the upper and lower airways and are associated with vasculitis, necrotizing glomerulonephritis and pulmonary capillaritis. The antigen responsible for this disease is Proteinase 3 (PR3, P29 or myeloblastin), which is one of the antibiotic proteins of neutrophilic granules belonging to the serine protease family. It is closely related to two others: Neutrophil Elastase and azurocidin. All three genes are expressed coordinately and their protein products are packaged together into azurophilic granules during neutrophil differentiation. PR3 is a neutrophil protein which is able to cleave elastin and is involved in proliferation of human leukemia cells. PR3 is expressed specifically in immature myeloid cells and is a G-CSF-responsive protein critical to factor-independent growth. The genes for all three of the related serine protease family members are located in a cluster on the tip of the short arm of human chromosome 19.

REFERENCES

1. Kao, R.C., et al. 1988. Proteinase 3. A distinct human polymorphonuclear leukocyte proteinase that produces emphysema in hamsters. *J. Clin. Invest.* 82: 1963-1973.
2. Niles, J.L., et al. 1989. Wegener's granulomatosis autoantigen is a novel neutrophil serine proteinase. *Blood* 74: 1888-1893.
3. Zimmer, M., et al. 1992. Three human elastase-like genes coordinately expressed in the myelomonocyte lineage are organized as a single genetic locus on 19pter. *Proc. Natl. Acad. Sci. USA* 89: 8215-8219.
4. Lutz, P.G., et al. 2000. Myeloblastin is a granulocyte colony-stimulating factor-responsive gene conferring factor-independent growth to hematopoietic cells. *Proc. Natl. Acad. Sci. USA* 97: 1601-1606.
5. LocusLink Report (LocusID: 177020). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: PRTN3 (human) mapping to 19p13.3; Prtn3 (mouse) mapping to 10 C1.

SOURCE

PR3 (D-1) is a mouse monoclonal antibody raised against amino acids 89-148 mapping within an internal region of PR3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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.

PROTOCOLS

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

APPLICATIONS

PR3 (H-8) is recommended for detection of precursor and mature forms of PR3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 PR3 siRNA (h): sc-42968, PR3 siRNA (m): sc-42969, PR3 shRNA Plasmid (h): sc-42968-SH, PR3 shRNA Plasmid (m): sc-42969-SH, PR3 shRNA (h) Lentiviral Particles: sc-42968-V and PR3 shRNA (m) Lentiviral Particles: sc-42969-V.

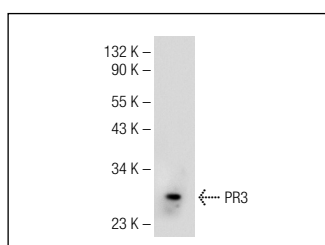
Molecular Weight of PR3: 29 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, RAW 264.7 whole cell lysate: sc-2211 or HeLa whole cell lysate: sc-2200.

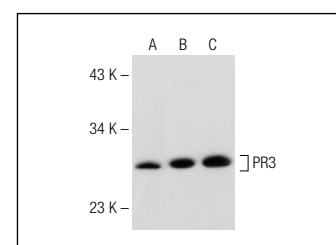
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PR3 (H-8): sc-74533. Western blot analysis of PR3 expression in NIH/3T3 whole cell lysate.



PR3 (H-8): sc-74533. Western blot analysis of PR3 expression in SH-SY5Y (A), RAW 264.7 (B) and KNRK (C) whole cell lysates.

RESEARCH USE

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