

PR3 (C-17): sc-19746

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 3 genes are expressed coordinately and their protein products are packaged together into azurophilic granules during neutrophil differentiation. PR3 is a 29 kDa 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 3 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 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PR3 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.

Blocking peptide available for competition studies, sc-19746 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PR3 (C-17) is recommended for detection of PR3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 shRNA Plasmid (h): sc-42968-SH and PR3 shRNA (h) Lentiviral Particles: sc-42968-V.

Molecular Weight of PR3: 29 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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



Try **PR3 (D-1): sc-74534**, our highly recommended monoclonal alternative to PR3 (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PR3 (D-1): sc-74534**.