

## PR3 (H-60): sc-28818

### 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.

### CHROMOSOMAL LOCATION

Genetic locus: PRTN3 (human) mapping to 19p13.3.

### SOURCE

PR3 (H-60) is a rabbit polyclonal antibody raised against amino acids 89-148 mapping within an internal region 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.

### APPLICATIONS

PR3 (H-60) is recommended for detection of precursor and mature forms of PR3 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), immunohistochemistry (including paraffin-embedded sections) (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.

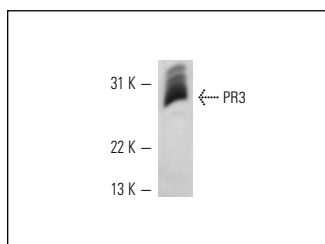
Molecular Weight of PR3: 29 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or SH-SY5Y cell lysate: sc-3812.

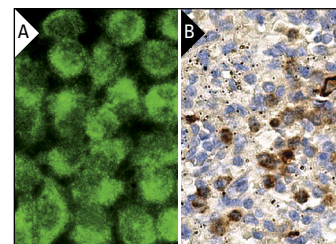
### RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

### DATA



PR3 (H-60): sc-28818. Western blot analysis of PR3 expression in HL-60 whole cell lysate.



PR3 (H-60): sc-28818. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of subset of cells in red pulp (B).

### SELECT PRODUCT CITATIONS

1. Uehara, A., et al. 2004. Proinflammatory cytokines induce Proteinase 3 as membrane-bound and secretory forms in human oral epithelial cells and antibodies to Proteinase 3 activate the cells through protease-activated receptor-2. *J. Immunol.* 173: 4179-4189.
2. Jankowska, A.M., et al. 2011. Loss of expression of neutrophil proteinase-3: a factor contributing to thrombotic risk in paroxysmal nocturnal hemoglobinuria. *Haematologica* 96: 954-962.

### 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.



Try **PR3 (D-1): sc-74534**, our highly recommended monoclonal alternative to PR3 (H-60). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **PR3 (D-1): sc-74534**.