

## PF-4 (M-50): sc-50300

### BACKGROUND

Platelet factor 4 (PF-4 or PF4) is a 70 amino acid protein that is released from the  $\alpha$ -granules of activated platelets and binds with high affinity to heparin. Platelets secrete low molecular weight PF-4, which binds to and neutralizes heparin and related sulfated glycosaminoglycans (GAGs). Its major physiologic role appears to be neutralization of heparin-like molecules on the endothelial surface of blood vessels, thereby inhibiting local antithrombin III activity and promoting coagulation. As a strong chemoattractant for neutrophils and fibroblasts, PF-4 probably has a role in inflammation and wound repair. Both PF4 and eotaxin, a specific chemoattractant for eosinophils, have been shown to exhibit stronger expression in spleens of adult NOA mice (an animal model of allergic or atopic dermatitis) than in younger mice, parallel to the increase in ulcerative skin lesions in older mice. This suggests that PF-4 and eotaxin may play important roles in the etiology of atopic dermatitis. PF-4 is encoded by a small inducible gene (SIG), so called because of its small size and its stimulation with platelet activation. The gene encoding PF-4 maps to human chromosome 4q13.3.

### REFERENCES

1. Rybak, M.E., et al. 1989. Interaction of platelet factor four with cultured vascular endothelial cells. *Blood* 73: 1534-1539.
2. Eisman, R., et al. 1990. Structural and functional comparison of the genes for human platelet factor 4 and PF-4alt. *Blood* 76: 336-344.
3. Watanabe, O., et al. 1999. Significantly elevated expression of PF-4 (platelet factor 4) and eotaxin in the NOA mouse, a model for atopic dermatitis. *J. Hum. Genet.* 44: 173-176.
4. O'Donovan, N., et al. 1999. Physical mapping of the CXC chemokine locus on human chromosome 4. *Cytogenet. Cell Genet.* 84: 39-42.
5. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 173460. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>.

### CHROMOSOMAL LOCATION

Genetic locus: Cxc14 (mouse) mapping to 5 E1.

### SOURCE

PF-4 (M-50) is a rabbit polyclonal antibody raised against amino acids 31-80 mapping at the N-terminus of PF-4 of mouse origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG 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.

### RESEARCH USE

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

### APPLICATIONS

PF-4 (M-50) is recommended for detection of precursor and mature chain of PF-4 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 PF-4 siRNA (m): sc-60026, PF-4 shRNA Plasmid (m): sc-60026-SH and PF-4 shRNA (m) Lentiviral Particles: sc-60026-V.

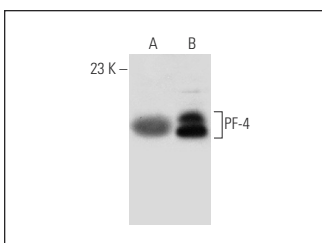
Molecular Weight of PF-4: 10 kDa.

Positive Controls: mouse spleen extract: sc-2391 or mouse hemoglobin whole cell lysate.

### 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



PF-4 (M-50): sc-50300. Western blot analysis of PF-4 expression in mouse hemoglobin whole cell lysate (A) and PBL treated mouse platelet (B) whole cell lysates.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.