

# Properdin (M-184): sc-68367

## BACKGROUND

The serum complement system (SCS), containing over 30 glycoproteins, influences physiological mechanisms of the body in response to immune complex (the classical pathway), carbohydrate (the lectin pathway) or bacterial (alternative pathway) initiation. Properdin, also known as complement factor P (CFP), PFC, BFP or PFD, is a secreted glycoprotein that participates in positively regulating the alternative pathway of the SCS. Properdin exists as a cyclic polymer with six Thrombospondin type 1 domains and binds to C3 and C5 convertase complexes (C3bBb and (C3b)<sub>n</sub>Bb) functioning to assist in their stabilization. Properdin is also required for the deposition of C3b onto the surface of pathogens. Mutations in the gene encoding Properdin can result in Properdin deficiency (PFD), a disease characterized by higher susceptibility to bacterial infections.

## REFERENCES

1. Fredrikson, G.N., et al. 1998. Expression of Properdin in complete and incomplete deficiency: normal *in vitro* synthesis by monocytes in two cases with Properdin deficiency type II due to distinct mutations. *J. Clin. Immunol.* 18: 272-282.
2. Vuagnat, B.B., et al. 2000. Activation of the alternative pathway of human complement by autologous cells expressing transmembrane recombinant Properdin. *Mol. Immunol.* 37: 467-478.
3. van den Bogaard, R., et al. 2000. Molecular characterisation of 10 Dutch Properdin type I deficient families: mutation analysis and X-inactivation studies. *Eur. J. Hum. Genet.* 8: 513-518.
4. Hartmann, S. and Hofsteenge, J. 2000. Properdin, the positive regulator of complement, is highly C-mannosylated. *J. Biol. Chem.* 275: 28569-28574.
5. Jelezarova, E., et al. 2000. Interaction of C3b<sub>2</sub>-IgG complexes with complement proteins Properdin, Factor B and Factor H: implications for amplification. *Biochem. J.* 349: 217-223.
6. Perdikoulis, M.V., et al. 2001. Expression and characterisation of the Thrombospondin type I repeats of human Properdin. *Biochim. Biophys. Acta* 1548: 265-277.

## CHROMOSOMAL LOCATION

Genetic locus: CFP (human) mapping to Xp11.23; Cfp (mouse) mapping to X A1.3.

## SOURCE

Properdin (M-184) is a rabbit polyclonal antibody raised against amino acids 281-464 mapping at the C-terminus of Properdin of mouse origin.

## PRODUCT

Each vial contains 200 µg 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.

## APPLICATIONS

Properdin (M-184) is recommended for detection of Properdin of mouse, rat and, to a lesser extent, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Properdin siRNA (h): sc-72082, Properdin siRNA (m): sc-62863, Properdin shRNA Plasmid (h): sc-72082-SH, Properdin shRNA Plasmid (m): sc-62863-SH, Properdin shRNA (h) Lentiviral Particles: sc-72082-V and Properdin shRNA (m) Lentiviral Particles: sc-62863-V.

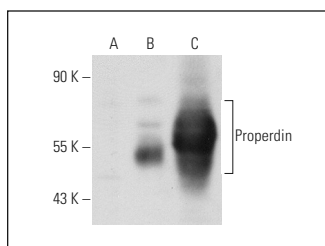
Molecular Weight of Properdin monomer: 53 kDa.

Positive Controls: I-11.15 whole cell lysate: sc-364370.

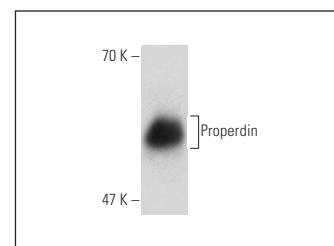
## RECOMMENDED SECONDARY REAGENTS

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



Properdin (M-184): sc-68367. Western blot analysis of Properdin expression in non-transfected 293T: sc-117752 (A), human Properdin transfected 293T: sc-159880 (B) and human PBL (C) whole cell lysates.



Properdin (M-184): sc-68367. Western blot analysis of Properdin expression in I-11.15 whole cell lysate.

## RESEARCH USE

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

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Try **Properdin (D-3): sc-393723** or **Properdin (C-4): sc-365664**, our highly recommended monoclonal alternatives to Properdin (M-184).