

Properdin (C-4): sc-365664

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)_nBb) 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.

CHROMOSOMAL LOCATION

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

SOURCE

Properdin (C-4) is a mouse monoclonal antibody raised against amino acids 289-469 mapping at the C-terminus of Properdin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Properdin (C-4) is available conjugated to agarose (sc-365664 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365664 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365664 PE), fluorescein (sc-365664 FITC), Alexa Fluor® 488 (sc-365664 AF488), Alexa Fluor® 546 (sc-365664 AF546), Alexa Fluor® 594 (sc-365664 AF594) or Alexa Fluor® 647 (sc-365664 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365664 AF680) or Alexa Fluor® 790 (sc-365664 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Properdin (C-4) is recommended for detection of Properdin 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), 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 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.

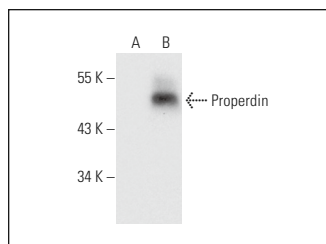
Molecular Weight of Properdin monomer: 53 kDa.

Positive Controls: Properdin (h): 293T Lysate: sc-159880.

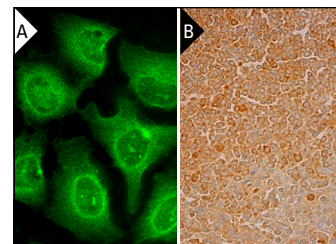
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Properdin (C-4): sc-365664. Western blot analysis of Properdin expression in non-transfected: sc-117752 (A) and human Properdin transfected: sc-159880 (B) 293T whole cell lysates.



Properdin (C-4): sc-365664. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp (B).

SELECT PRODUCT CITATIONS

1. Zeng, J., et al. 2018. Increased serum protein levels by Yuanshi Shengmai Chenggu tablet in treatment of avascular osteonecrosis of the femoral head. *Mol. Med. Rep.* 17: 2121-2126.
2. Mangogna, A., et al. 2021. Prognostic value of complement properdin in cancer. *Front. Immunol.* 11: 614980.

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.

PROTOCOLS

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