

Protein S (F-10): sc-271326

BACKGROUND

Protein S (PROS) is a vitamin K-dependent plasma protein that inhibits blood clotting by serving as a cofactor for activated protein C (APC) and facilitates clearance of early apoptotic cells. In the plasma, circulating Protein S becomes inactive upon complexing with C4b-binding protein (C4BP); 60-70% of Protein S circulates in complex with C4BP. Calcium-dependent association of C4BP-Protein S with apoptotic cells influences the regulation of complement activation. Protein S has APC-independent anticoagulant activity through direct inhibition of prothrombin activation via interactions with Factor X A, Factor V A and phospholipids. Autosomal dominant Protein S deficiency (levels 15 to 37% of normal) correlates with severe recurrent venous thrombosis.

CHROMOSOMAL LOCATION

Genetic locus: PROS1 (human) mapping to 3q11.1; Pros1 (mouse) mapping to 16 C1.3.

SOURCE

Protein S (F-10) is a mouse monoclonal antibody raised against amino acids 81-170 of Protein S 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.

Protein S (F-10) is available conjugated to agarose (sc-271326 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271326 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271326 PE), fluorescein (sc-271326 FITC), Alexa Fluor® 488 (sc-271326 AF488), Alexa Fluor® 546 (sc-271326 AF546), Alexa Fluor® 594 (sc-271326 AF594) or Alexa Fluor® 647 (sc-271326 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271326 AF680) or Alexa Fluor® 790 (sc-271326 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Protein S (F-10) is recommended for detection of Protein S 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 Protein S siRNA (h): sc-63328, Protein S siRNA (m): sc-63329, Protein S shRNA Plasmid (h): sc-63328-SH, Protein S shRNA Plasmid (m): sc-63329-SH, Protein S shRNA (h) Lentiviral Particles: sc-63328-V and Protein S shRNA (m) Lentiviral Particles: sc-63329-V.

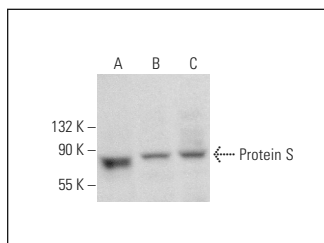
Molecular Weight of Protein S: 70 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, Hep G2 cell lysate: sc-2227 or KNRK whole cell lysate: sc-2214.

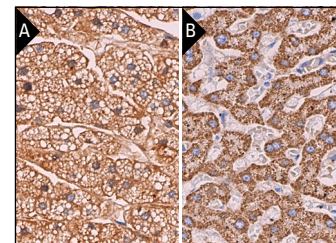
RECOMMENDED SUPPORT REAGENTS

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



Protein S (F-10): sc-271326. Western blot analysis of Protein S expression in Hep G2 (A), Sol8 (B) and KNRK (C) whole cell lysates.



Protein S (F-10): sc-271326. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (B).

SELECT PRODUCT CITATIONS

- Vélez, P., et al. 2015. A 2D-DIGE-based proteomic analysis reveals differences in the platelet releasate composition when comparing thrombin and collagen stimulations. *Sci. Rep.* 5: 8198.
- Jiang, L., et al. 2019. The Pros1/Tyro3 axis protects against periodontitis by modulating STAT/SOCS signalling. *J. Cell. Mol. Med.* 23: 2769-2781.

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.