

# Protein S (H-90): sc-25836

## 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 Xa, Factor Va and phospholipids. Autosomal dominant Protein S deficiency (levels 15 to 37% of normal) correlates with severe recurrent venous thrombosis.

## REFERENCES

1. Dahlback, B., et al. 1981. High molecular weight complex in human plasma between vitamin K dependent Protein S and complement component C4b-binding protein. *Proc. Nat. Acad. Sci.* 78: 2512-2516.
2. Comp, P.C., et al. 1984. Recurrent venous thromboembolism in patients with a partial deficiency of Protein S. *New Eng. J. Med.* 311: 1525-1528.
3. Andersen, B.D., et al. 2001. Characterization and structural impact of five novel PROS1 mutations in eleven Protein S-deficient families. *Thromb. Haemost.* 86: 1392-1399.
4. Sere, K.M., et al. 2001. Purified Protein S contains multimeric forms with increased APC-independent anticoagulant activity. *Biochemistry* 40: 8852-8860.

## SOURCE

Protein S (H-90) is a rabbit polyclonal antibody raised against amino acids 81-170 of Protein S 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

Protein S (H-90) is recommended for detection of Protein S of mouse, rat and 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 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.

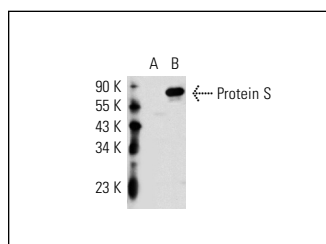
Molecular Weight of Protein S: 70 kDa.

Positive Controls: Protein S (h): 293 Lysate: sc-111877 or Hep G2 cell lysate: sc-2227.

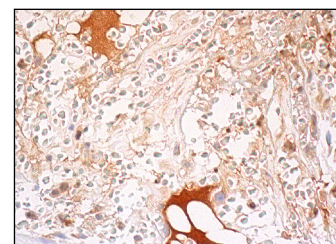
## RECOMMENDED SECONDARY REAGENTS

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



Protein S (H-90): sc-25836. Western blot analysis of Protein S expression in non-transfected: sc-110760 (A) and human Protein S transfected: sc-111877 (B) 293 whole cell lysates.



Protein S (H-90): sc-25836. Immunoperoxidase staining of formalin fixed, paraffin-embedded human blood vessels showing plasma staining.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Protein S (F-10): sc-271326** or **Protein S (C-5): sc-271400**, our highly recommended monoclonal alternatives to Protein S (H-90).