SANTA CRUZ BIOTECHNOLOGY, INC.

Protein C (H-140): sc-292686

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Protein C is a vitamin K-dependent plasma protein that is produced in the liver and made up of two polypeptide chains. It is an important anti-coagulant activated by Thrombin bound to an endothelial surface receptor and it enzymatically cleaves activated forms of Factors V and VIII, thus inhibiting blood coagulation. Protein C is similar to the prothrombin group of blood coagulation factors in its primary structure. Normal protein C concentration in human plasma is approximately 1-3 ng/ml and the proenzyme concentration is approximately 3 µg/ml. Protein C deficiency is associated with inherited thrombophilia, a rare genetic disorder that predisposes affected individuals to venous thrombosis and habitual abortion.

REFERENCES

1. Griffin, J.H., et al. 1982. Deficiency of Protein C in congenital thrombotic disease. J. Clin. Invest. 68: 1370-1373.
2. Esmon, C.T. 1989. The roles of Protein C and thrombomodulin in the regulation of blood coagulation. J. Biol. Chem. 264: 4743-4746.
3. Dahlbäck, B., et al. 1993. Familial thrombophilia due to a previously unrecognized mechanism characterized by poor anticoagulant response to activated Protein C: prediction of a cofactor to activated Protein C. Proc. Nat. Acad. Sci. USA 90: 1004-1008.
4. Bertina, R.M., et al. 1994. Mutation in blood coagulation Factor V associated with resistance to activated Protein C. Nature 369: 64-67.
5. Dahlbäck, B. 1995. Inherited thrombophilia: resistance to activated Protein C as a pathogenic factor of venous thromboembolism. Blood 85: 607-614.
6. Preston, F.E., et al. 1996. Increased fetal loss in women with heritable thrombophilia. Lancet 348: 913-916.
7. Abu-Amero, K.K., et al. 2006. Severe type I Protein C deficiency with neonatal purpura fulminans due to a novel homozygous mutation in exon 6 of the Protein C gene. J. Thromb. Haemost. 4: 1152-1153.
8. Brueckmann, M., et al. 2006. Recombinant human activated Protein C upregulates the release of soluble fractalkine from human endothelial cells. Br. J. Haematol. 133: 550-557.
9. Esmon, C.T. 2006. Inflammation and the activated Protein C anticoagulant pathway. Semin. Thromb. Hemost. 1: 49-60.

CHROMOSOMAL LOCATION

Genetic locus: PROC (human) mapping to 2q14.3; Proc (mouse) mapping to 18 B1.

SOURCE

Protein C (H-140) is a rabbit polyclonal antibody raised against amino acids 256-395 mapping near the C-terminus of Protein C 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 C (H-140) is recommended for detection of Protein C of human and, to a lesser extent, mouse and rat 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).

Protein C (H-140) is also recommended for detection of Protein C in additional species, including canine.

Suitable for use as control antibody for Protein C siRNA (h): sc-72054, Protein C siRNA (m): sc-72140, Protein C shRNA Plasmid (h): sc-72054-SH, Protein C shRNA Plasmid (m): sc-72140-SH, Protein C shRNA (h) Lentiviral Particles: sc-72054-V and Protein C shRNA (m) Lentiviral Particles: sc-72140-V.

Molecular Weight of Protein C: 52 kDa.

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.

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 or our catalog for detailed protocols and support products.