



Protein Z (C-16): sc-23505

BACKGROUND

The human protein Z gene maps to chromosome 13q34 and encodes a 62 kDa vitamin K-dependent plasma protein with a plasma half-life of approximately 2.5 days. Protein Z, Protein C and Coagulation Factors VII, IX and X share a similar structure. Protein Z limits the normal coagulation response by serving as a cofactor for the inhibition of Factor Xa by Protein Z-dependent protease inhibitor (PZI). At phospholipid surfaces, Protein Z forms a calcium ion-dependent complex with Factor Xa. In the presence of Protein Z, Ca²⁺ and procoagulant phospholipids, PZI generates rapid inhibition of Factor Xa by forming a tertiary complex with Factor Xa and Protein Z. Protein Z deficiency and Protein Z autoantibodies correlate to early fetal loss in women.

REFERENCES

1. Broze, G.J., Jr. and Miletich, J.P. 1984. Human Protein Z. *J. Clin. Invest.* 73: 933-938.
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3. Han, X., Fiehler, R. and Broze, G.J., Jr. 1998. Isolation of a Protein Z-dependent plasma protease inhibitor. *Proc. Natl. Acad. Sci. USA* 95: 9250-9255.
4. Yin, Z.F., Huang, Z.F., Cui, J., Fiehler, R., Lasky, N., Ginsburg, D. and Broze, G.J., Jr. 2000. Prothrombotic phenotype of Protein Z deficiency. *Proc. Natl. Acad. Sci. USA* 97: 6734-6738.
5. Gris, J.C., Amadio, C., Mercier, E., Lavigne-Lissalde, G., Dechaud, H., Hoffet, M., Quere, I., Amiral, J., Dauzat, M. and Mares, P. 2003. Anti-Protein Z antibodies in women with pathological pregnancies. *Blood* 101: 4859-4852.

SOURCE

Protein Z (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Protein Z 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.

Blocking peptide available for competition studies, sc-23505 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

Protein Z (C-16) is recommended for detection of Protein Z of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Protein Z siRNA (h): sc-106450, Protein Z shRNA Plasmid (h): sc-106450-SH and Protein Z shRNA (h) Lentiviral Particles: sc-106450-V.

Molecular Weight of Protein Z: 62 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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