

Factor VII (M-19): sc-16347

BACKGROUND

Homeostasis following tissue injury involves the deployment of essential plasma procoagulants (prothrombin, and Factors X, IX, V, and VIII), which are involved in a blood coagulation cascade that leads to the formation of insoluble fibrin clots and the promotion of platelet aggregation. Coagulation Factor VII (serum prothrombin conversion accelerator, proconvertin, F7, Factor VII) is a 406 amino acid, vitamin K-dependent, single chain serine protease that is synthesized in the liver and circulates as an inactive precursor. Factor IX A, Factor X A, Factor XII A, or thrombin mediated proteolytic cleavage of Factor VII at Arg152-Ile153 generates Factor VII A, an active serine protease composed of a catalytic heavy chain disulfide linked to a light chain, containing 2 EGF-like domains. Mutations at the F7 locus that lead to Factor VII deficiencies are generally asymptomatic or phenotypically uncharacterized, with hemorrhagic diathesis occurring at extremely low levels.

REFERENCES

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3. O'Hara, P.J., et al. 1987. Nucleotide sequence of the gene coding for human Factor VII, a vitamin K-dependent protein participating in blood coagulation. *Proc. Natl. Acad. Sci. USA* 84: 5158-5162.
4. Davie, E.W., et al. 1991. The coagulation cascade: initiation, maintenance, and regulation. *Biochemistry* 30: 10363-10370.
5. Chambers, R.C., et al. 2000. Thrombin is a potent inducer of connective tissue growth factor production via proteolytic activation of protease-activated receptor-1. *J. Biol. Chem.* 275: 35584-35591.
6. Millar, D.S., et al. 2000. Molecular analysis of the genotype-phenotype relationship in Factor VII deficiency. *Hum. Genet.* 107: 327-342.
7. McVey, J.H., et al. 2001. Factor VII deficiency and the FVII mutation database. *Hum. Mutat.* 17: 3-17.

CHROMOSOMAL LOCATION

Genetic locus: F7 (human) mapping to 13q34; F7 (mouse) mapping to 8 A1.1.

SOURCE

Factor VII (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Factor VII of mouse 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-16347 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Factor VII (M-19) is recommended for detection of Factor VII of mouse, rat and 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), 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).

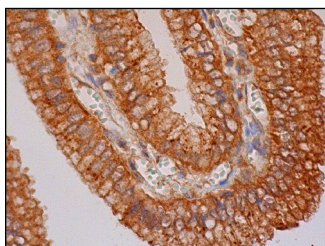
Suitable for use as control antibody for Factor VII siRNA (h): sc-40401, Factor VII siRNA (m): sc-40402, Factor VII shRNA Plasmid (h): sc-40401-SH, Factor VII shRNA Plasmid (m): sc-40402-SH, Factor VII shRNA (h) Lentiviral Particles: sc-40401-V and Factor VII shRNA (m) Lentiviral Particles: sc-40402-V.

Molecular Weight of Factor VII: 200/80/73/50/43 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Factor VII (M-19): sc-16347. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells.

STORAGE

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



Try **Factor VII (CaFVII-22): sc-101369**, our highly recommended monoclonal alternative to Factor VII (M-19).