SANTA CRUZ BIOTECHNOLOGY, INC.

Factor V (H-78): sc-292858

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hemostasis 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 V (Factor V, FV, proaccelerin, labile factor) is a 2,196 amino acid, single chain glycoprotein that is cleaved by thrombin to yield an active, Ca^{2+} dependent dimer. This heterodimer is essential to the blood coagulation cascade. Together with catalytic Factor Xa and Ca^{2+} on the surface of platelets or endothelial cells, Factor Va coordinates in a prothrombinase complex, which mediates proteolysis of prothrombin into active thrombin. Due to both the procoagulant properties of Factor V in coordinating proteolytic activation of thrombin, and anticoagulant properties as a cofactor to activated protein C (APC), which selectively destroys FVa and FXa, alterations at the Factor V locus can contribute to hemorrhagic diathesis or thrombosis, respectively.

REFERENCES

1. Davie, E.W. and Fujikawa, K. 1975. Basic mechanisms in blood coagulation. Annu. Rev. Biochem. 44: 799-829.
2. Kane, W.H. and Davie, E.W. 1986. Cloning of a cDNA coding for human factor V, a blood coagulation factor homologous to factor VIII and ceruloplasmin. Proc. Natl. Acad. Sci. USA 83: 6800-6804.
3. Jenny, R.J., et al. 1987. Complete cDNA and derived amino acid sequence of human factor V. Proc. Natl. Acad. Sci. USA 84: 4846-4850.
4. Davie, E.W., et al. 1991. The coagulation cascade: initiation, maintenance, and regulation. Biochemistry 30: 10363-10370.
5. Rand, M.D., et al. 1994. Platelet coagulation factor Va: the major secretory platelet phosphoprotein. Blood 83: 2180-2190.
6. Macedo-Ribeiro, S., et al. 1999. Crystal structures of the membrane-binding C2 domain of human coagulation factor V. Nature 402: 434-439.
7. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 227400. World Wide Web URL: http://www.ncbi.nlm.nih. gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: F5 (human) mapping to 1q24.2; F5 (mouse) mapping to 1 H2.2.

SOURCE

Factor V (H-78) is a rabbit polyclonal antibody raised against amino acids 1667-1744 mapping near the C-terminus of Factor V 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.

STORAGE

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

APPLICATIONS

Factor V (H-78) is recommended for detection of Factor V 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Factor V (H-78) is also recommended for detection of Factor V in additional species, including canine, bovine and porcine.

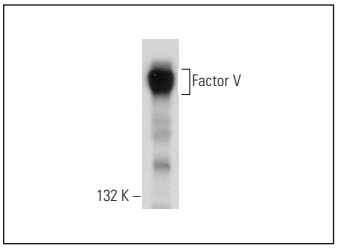
Suitable for use as control antibody for Factor V siRNA (h): sc-40399, Factor V siRNA (m): sc-40400, Factor V shRNA Plasmid (h): sc-40399-SH, Factor V shRNA Plasmid (m): sc-40400-SH, Factor V shRNA (h) Lentiviral Particles: sc-40399-V and Factor V shRNA (m) Lentiviral Particles: sc-40400-V.

Molecular Weight of Factor V: 330 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.

DATA



Factor V (H-78): sc-292858. Western blot analysis of Factor V expression in human platelet extract.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **Factor V (6A5): sc-13512** or **Factor V (A-2): sc-390181**, our highly recommended monoclonal alternatives to Factor V (H-78).