Factor V (AHV-5110): sc-73458



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, Ca²+ dependent dimer. This dimer is essential to the blood coagulation cascade. Together with catalytic Factor Xa and Ca²+ 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 Factor Va and Factor Xa, alterations at the Factor V locus can contribute to hemorrhagic diathesis or thrombosis, respectively.

REFERENCES

- Davie, E.W. and Fujikawa, K. 1975. Basic mechanisms in blood coagulation. Annu. Rev. Biochem. 44: 799-829.
- 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., Pittman, D.D., Toole, J.J., Kriz, R.W., Aldape, R.A., Hewick, R.M., Kaufman, R.J. and Mann, K.G. 1987. Complete cDNA and derived amino acid sequence of human Factor V. Proc. Natl. Acad. Sci. USA 84: 4846-4850.
- Davie, E.W., Fujikawa, K. and Kisiel, W. 1991. The coagulation cascade: initiation, maintenance, and regulation. Biochemistry 30: 10363-10370.
- Rand, M.D., Kalafatis, M. and Mann, K.G. 1994. Platelet coagulation Factor V A: the major secretory platelet phosphoprotein. Blood 83: 2180-2190.
- Macedo-Ribeiro, S., Bode, W., Huber, R., Quinn-Allen, M.A., Kim, S.W., Ortel, T.L., Bourenkov, G.P., Bartunik, H.D., Stubbs, M.T., Kane, W.H. and Fuentes-Prior, P. 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.

SOURCE

Factor V (AHV-5110) is a mouse monoclonal antibody raised against Factor V of human origin.

PRODUCT

Each vial contains 100 $\mu g \ lg G_1$ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

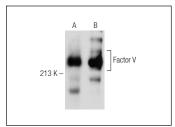
Factor V (AHV-5110) is recommended for detection of Factor V of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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

Molecular Weight of Factor V: 330 kDa.

Positive Controls: human platelet extract : sc-363773 or HeLa whoel cell lysate: sc-2200.

DATA



Factor V (AHV-5110): sc-73458. Western blot analysis of Factor V expression in human platelet extract (A)

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 for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com