SANTA CRUZ BIOTECHNOLOGY, INC.

Factor IX (GMA-138): sc-65952

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 IX (plasma thromboplastic component, F9, F.IX, HEMB) is a vitamin K-dependent, single chain serine protease that is synthesized in the liver and circulates as an inactive precursor. Factor XI A mediated proteolytic cleavage of Factor IX generates Factor IX A, an active serine protease composed of a 145 amino acid light chain and a 236 amino acid catalytic heavy chain, linked through disulfide bonds. Genetic alterations at the Factor IX locus such as point mutations, insertions and deletions, can lead to hemophilia B, also known as Christmas disease.

REFERENCES

1. Davie, E.W. and Fujikawa, K. 1975. Basic mechanisms in blood coagulation. Annu. Rev. Biochem. 44: 799-829.
2. Kurachi, K. and Davie, E.W. 1982. Isolation and characterization of a cDNA coding for human Factor IX. Proc. Natl. Acad. Sci. USA 79: 6461-6464.
3. Jaye, M., de la Salle, H., Schamber, F., Balland, A., Kohli, V., Findeli, A., Tolstoshev, P. and Lecocq, J.P. 1983. Isolation of a human antihaemophilic Factor IX cDNA clone using a unique 52-base synthetic oligonucleotide probe deduced from the amino acid sequence of bovine Factor IX. Nucleic Acids Res. 11: 2325-2335.
4. Davie, E.W., Fujikawa, K. and Kisiel, W. 1991. The coagulation cascade: initiation, maintenance, and regulation. Biochemistry 30: 10363-10370.
5. Chambers, R.C., Leoni, P., Blanc-Brude, O.P., Wembridge, D.E. and Laurent, G.J. 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. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 306900. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: F9 (human) mapping to Xq27.1.

SOURCE

Factor IX (GMA-138) is a mouse monoclonal antibody raised against Factor IX of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 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.

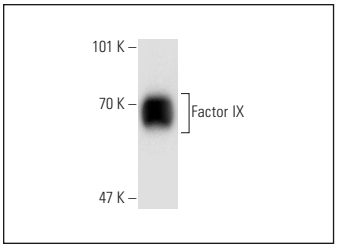
APPLICATIONS

Factor IX (GMA-138) is recommended for detection of Factor IX of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Factor IX siRNA (h): sc-40403, Factor IX shRNA Plasmid (h): sc-40403-SH and Factor IX shRNA (h) Lentiviral Particles: sc-40403-V.

Molecular Weight of Factor IX: 59 kDa.

DATA



Factor IX (GMA-138): sc-65952. Western blot analysis of human recombinant Factor IX.

SELECT PRODUCT CITATIONS

1. Simhadri, V.L., Hamasaki-Katagiri, N., Lin, B.C., Hunt, R., Jha, S., Tseng, S.C., Wu, A., Bentley, A.A., Zichel, R., Lu, Q., Zhu, L., Freedberg, D.I., Monroe, D.M., Sauna, Z.E., Peters, R., Komar, A.A. and Kimchi-Sarfaty, C. 2017. Single synonymous mutation in factor IX alters protein properties and underlies haemophilia B. J. Med. Genet. 54: 338-345.

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.