BACKGROUND

Hemostasis following tissue injury involves the deployment of essential plasma procoagulants which are involved in a blood coagulation cascade leading to the formation of insoluble fibrin clots and the promotion of platelet aggregation. Factor XII, (FXII) a blood coagulation factor, is a serum glycoprotein that participates in fibrinolysis, as well as the generation of Bradykinin and Angiotensin. An enzyme of the serine protease (or serine endopeptidase) class, it activates both Factor XI and prekallikrein in the coagulation cascade. Factor XII deficiency, a rare hereditary disorder slightly more prevalent among Asians, does not cause excessive hemorrhaging since other coagulation factors compensate for it. Researchers have still reported Factor XII deficiency to be a risk factor for the development of arterial and venous thromboembolism. The gene for human Factor XII maps to the very end of the long arm of the fifth chromosome (5q33-qter). The heavy chain of human Factor XII retains an equilibrium dissociation constant of 9.8nM.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: F12 (human) mapping to 5q33.3; F12 (mouse) mapping to 13 B1.

SOURCE

Factor XII heavy chain (B7C9) is a mouse monoclonal antibody raised against Factor XII heavy chain of human origin.

PRODUCT

Each vial contains 200 µg IgG, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Factor XII heavy chain (B7C9) is recommended for detection of Factor XII heavy chain of mouse, rat and 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)). Molecular Weight of Factor XII heavy chain: 50 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

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.