SANTA CRUZ BIOTECHNOLOGY, INC.

Fibrinogen (5C5): sc-69775

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The plasma glycoprotein Fibrinogen is synthesized in the liver and comprises three structurally different subunits: α, β and γ. Fibrinogen is important in platelet aggregation, the final step of the coagulation cascade (i.e. the formation of Fibrin) and determination of plasma viscosity and erythrocyte aggregation. It is both constitutively expressed and inducible during an acute phase reaction. Hemostasis following tissue injury deploys essential plasma procoagulants (Prothrombin and Factors X, IX, V and VIII), which are involved in a blood coagulation cascade leading to the formation of insoluble Fibrin clots and the promotion of platelet aggregation. Following vascular injury, Fibrinogen is cleaved by Thrombin to form Fibrin, which is the most abundant component of blood clots. The cleavage products of Fibrinogen regulate cell adhesion and spreading, display vasoconstrictor and chemotactic activities, and are mitogens for several cell types.

REFERENCES

1. Davie, E.W. and Fujikawa, K. 1975. Basic mechanisms in blood coagulation. Annu. Rev. Biochem. 44: 799-829.
2. Davie, E.W., et al. 1991. The coagulation cascade: initiation, maintenance, and regulation. Biochemistry 30: 10363-10370.
3. Danesh, J., et al. 1998. Association of Fibrinogen, C-reactive protein, albumin, or leukocyte count with coronary heart disease: meta-analyses of prospective studies. JAMA 279: 1477-1482.

CHROMOSOMAL LOCATION

Genetic locus: FGA/FGB/FGG (human) mapping to 4q31.3.

SOURCE

Fibrinogen (5C5) is a mouse monoclonal antibody raised against purified Fibrinogen of human origin.

PRODUCT

Each vial contains IgG_1 in 100 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 1% glycerol and < 0.1% stabilizer protein.

APPLICATIONS

Fibrinogen (5C5) is recommended for detection of whole Fibrinogen, consisting of a dimer of three pairs of non-identical chains, α, β, and γ, of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:5000); may cross-react with fibrin degredation products.

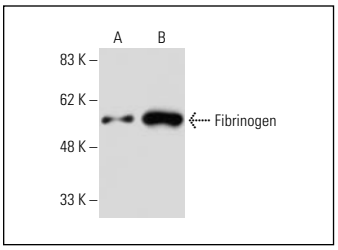
Molecular Weight of Fibrinogen: 60 kDa.

Positive Controls: human plasma extract: sc-364374.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



Fibrinogen (5C5): sc-69775. Western blot analysis of Fibrinogen purified from human plasma (**A**) and in human plasma (**B**).

SELECT PRODUCT CITATIONS

1. Parguiña, A.F., et al. 2012. A detailed proteomic analysis of rhodocytin-activated platelets reveals novel clues on the CLEC-2 signalosome: implications for CLEC-2 signaling regulation. Blood 120: e117-e126.
2. Westbury, S.K., et al. 2013. Partial deletion of the αC-domain in the Fibrinogen Perth variant is associated with thrombosis, increased clot strength and delayed fibrinolysis. Thromb. Haemost. 110: 1135-1144.
3. Vélez, P., et al. 2014. Identification of a circulating microvesicle protein network involved in ST-elevation myocardial infarction. Thromb. Haemost. 112: 716-726.
4. Yan, C., et al. 2018. Activation of hepatic stellate cells during liver carcinogenesis requires Fibrinogen/Integrin $\alpha_V\beta_5$ in zebrafish. Neoplasia 20: 533-542.
5. Barrachina, M.N., et al. 2018. GPVI surface expression and signalling pathway activation are increased in platelets from obese patients: elucidating potential anti-atherothrombotic targets in obesity. Atherosclerosis 281: 62-70.
6. Barrachina, M.N., et al. 2019. A combination of proteomic approaches identifies a panel of circulating extracellular vesicle proteins related to the risk of suffering cardiovascular disease in obese patients. Proteomics 19: e1800248.
7. Barrachina, M.N., et al. 2019. Data on hyper-activation of GPVI signalling in obese patients: towards the identification of novel antiplatelet targets in obesity. Data Brief 23: 103784.
8. Hermida-Nogueira, L., et al. 2020. Deciphering the secretome of leukocyte-platelet rich fibrin: towards a better understanding of its wound healing properties. Sci. Rep. 10: 14571.

RESEARCH USE

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