SANTA CRUZ BIOTECHNOLOGY, INC.

Fibrinogen γ (B-1): sc-133157

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., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: FGG (human) mapping to 4q31.3; Fgg (mouse) mapping to 3 E3.

SOURCE

Fibrinogen γ (B-1) is a mouse monoclonal antibody raised against amino acids 27-220 mapping near the N-terminus of Fibrinogen γ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Fibrinogen γ (B-1) is recommended for detection of Fibrinogen γ-A and -B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fibrinogen γ siRNA (h): sc-37098, Fibrinogen γ siRNA (m): sc-37099, Fibrinogen γ shRNA Plasmid (h): sc-37098-SH, Fibrinogen γ shRNA Plasmid (m): sc-37099-SH, Fibrinogen γ shRNA (h) Lentiviral Particles: sc-37098-V and Fibrinogen γ shRNA (m) Lentiviral Particles: sc-37099-V.

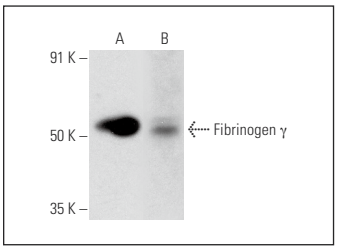
Molecular Weight of Fibrinogen γ: 57 kDa.

Positive Controls: human platelet extract: sc-363773, Hep G2 cell lysate: sc-2227 or HeLa nuclear extract: sc-2120.

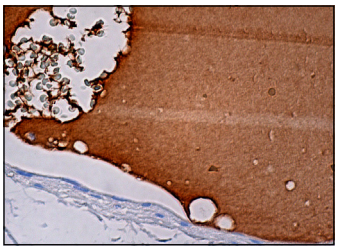
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Fibrinogen γ (B-1): sc-133157. Western blot analysis of Fibrinogen γ expression in human platelet extract (**A**) and Hep G2 (**B**) whole cell lysates.



Fibrinogen γ (B-1): sc-133157. Immunoperoxidase staining of formalin fixed, paraffin-embedded human blood vessel showing plasma staining.

SELECT PRODUCT CITATIONS

1. Soon, A.S., et al. 2011. Modulation of fibrin matrix properties via knob:hole affinity interactions using peptide-PEG conjugates. Biomaterials 32: 4406-4414.
2. Wang, Z., et al. 2012. Differential proteome profiling of pleural effusions from lung cancer and benign inflammatory disease patients. Biochim. Biophys. Acta 1824: 692-700.
3. Chakrabarti, A. and Mukhopadhyay, D. 2012. Novel adaptors of amyloid precursor protein intracellular domain and their functional implications. Genomics Proteomics Bioinformatics 10: 208-216.
4. Lee, D.H., et al. 2019. Identification of serum biomarkers for premature ovarian failure. Biochim. Biophys. Acta Proteins Proteom. 1867: 219-226.
5. Cordido, A., et al. 2022. Quantitative proteomic study unmasks fibrinogen pathway in polycystic liver disease. Biomedicines 10: 290.

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.