SANTA CRUZ BIOTECHNOLOGY, INC.

Fibrinogen α (A-6): sc-166968

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 (human) mapping to 4q31.3.

SOURCE

Fibrinogen α (A-6) is a mouse monoclonal antibody raised against amino acids 21-320 mapping near the N-terminus of Fibrinogen α of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Fibrinogen α (A-6) is recommended for detection of Fibrinogen α, Fibrinogen α-E and Fibrinopeptide A of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fibrinogen α siRNA (h): sc-40409, Fibrinogen α shRNA Plasmid (h): sc-40409-SH and Fibrinogen α shRNA (h) Lentiviral Particles: sc-40409-V.

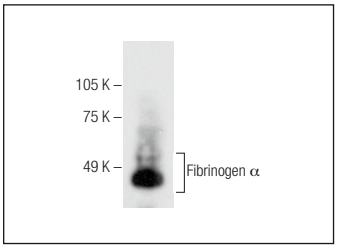
Molecular Weight of Fibrinogen α: 60 kDa.

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

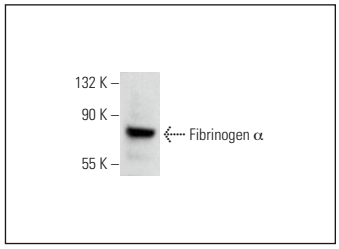
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Fibrinogen α (A-6): sc-166968. Western blot analysis of Fibrinogen α expression in human platelet extract.



Fibrinogen α (A-6): sc-166968. Western blot analysis of Fibrinogen α expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Ronnlund, D., et al. 2014. Multicolor fluorescence nanoscopy by photobleaching: concept, verification, and its application to resolve selective storage of proteins in platelets. ACS Nano 8: 4358-4365.
2. Sugiyama, M., et al. 2015. Influenza infection induces platelet-endothelial adhesion which contributes to lung injury. J. Virol. 90: 1812-1823.
3. Kang, M., et al. 2015. FDP-E induces adipocyte inflammation and suppresses Insulin-stimulated glucose disposal: effect of inflammation and obesity on fibrinogen Bβ mRNA. Am. J. Physiol. Cell Physiol. 309: C767-C774.
4. Tóth, E., et al. 2021. Fibrin to von Willebrand factor ratio in arterial thrombi is associated with plasma levels of inflammatory biomarkers and local abundance of extracellular DNA. Thromb. Res. 209: 8-15.

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.