

Fibrinogen α (C-7): sc-398806

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 pro-coagulants (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.

CHROMOSOMAL LOCATION

Genetic locus: FGA (human) mapping to 4q31.3; Fga (mouse) mapping to 3 E3.

SOURCE

Fibrinogen α (C-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 581-607 within an internal region of Fibrinogen α of human origin.

PRODUCT

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

Fibrinogen α (C-7) is available conjugated to agarose (sc-398806 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398806 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398806 PE), fluorescein (sc-398806 FITC), Alexa Fluor® 488 (sc-398806 AF488), Alexa Fluor® 546 (sc-398806 AF546), Alexa Fluor® 594 (sc-398806 AF594) or Alexa Fluor® 647 (sc-398806 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398806 AF680) or Alexa Fluor® 790 (sc-398806 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398806 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

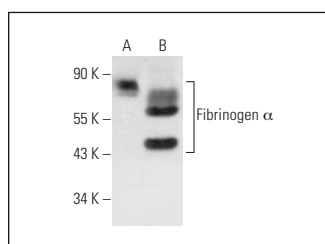
Fibrinogen α (C-7) is recommended for detection of Fibrinogen isoforms α and α -E of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting 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 siRNA (m): sc-40410, Fibrinogen α shRNA Plasmid (h): sc-40409-SH, Fibrinogen α shRNA Plasmid (m): sc-40410-SH, Fibrinogen α shRNA (h) Lentiviral Particles: sc-40409-V and Fibrinogen α shRNA (m) Lentiviral Particles: sc-40410-V.

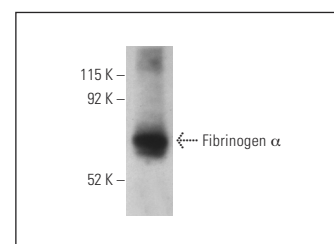
Molecular Weight of Fibrinogen α : 60 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, rat liver extract: sc-2395 or Hep G2 cell lysate: sc-2227.

DATA



Fibrinogen α (C-7): sc-398806. Western blot analysis of Fibrinogen α expression in c4 whole cell lysate (A) and rat liver tissue extract (B).



Fibrinogen α (C-7) HRP: sc-398806 HRP. Direct western blot analysis of Fibrinogen α expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Woods, I., et al. 2020. Fabrication of blood-derived elastogenic vascular grafts using electrospun Fibrinogen and polycaprolactone composite scaffolds for pediatric applications. *J. Tissue Eng. Regen. Med.* 14: 1281-1295.
2. Inano, S., et al. 2021. Acquired hypofibrinogenemia in a patient with multiple myeloma. *Int. J. Hematol.* 114: 395-400.
3. Cordido, A., et al. 2022. Quantitative proteomic study unmasks Fibrinogen pathway in polycystic liver disease. *Biomedicines* 10: 290.
4. Zheng, G., et al. 2023. Effects of a neurokinin-1 receptor antagonist in the acute phase after thoracic spinal cord injury in a rat model. *Front. Mol. Neurosci.* 16: 1128545.
5. Sucajtsy-Szulc, E., et al. 2023. Hepatocyte nuclear factor-1 α increases fibrinogen gene expression in liver and plasma fibrinogen concentration in rats with experimental chronic renal failure. *Int. J. Mol. Sci.* 24: 5733.
6. Colcimen, N., et al. 2023. Evaluation of the effects of sinapic acid and ellagic acid on sciatic nerve in experimental diabetic rats by immunohistochemical and stereological methods. *J. Chem. Neuroanat.* 131: 102274.

RESEARCH USE

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