SANTA CRUZ BIOTECHNOLOGY, INC.

Fibrinogen β (D-4): sc-271035

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.

CHROMOSOMAL LOCATION

Genetic locus: FGB (human) mapping to 4q31.3; Fgb (mouse) mapping to 3 E3.

SOURCE

Fibrinogen β (D-4) is a mouse monoclonal antibody raised against amino acids 31-300 mapping near the N-terminus of Fibrinogen β 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.

Fibrinogen β (D-4) is available conjugated to agarose (sc-271035 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271035 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271035 PE), fluorescein (sc-271035 FITC), Alexa Fluor® 488 (sc-271035 AF488), Alexa Fluor® 546 (sc-271035 AF546), Alexa Fluor® 594 (sc-271035 AF594) or Alexa Fluor® 647 (sc-271035 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271035 AF680) or Alexa Fluor® 790 (sc-271035 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Fibrinogen β (D-4) is recommended for detection of Fibrinogen β and Fibrinopeptide 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).

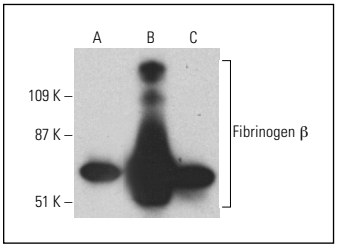
Suitable for use as control antibody for Fibrinogen β siRNA (h): sc-37096, Fibrinogen β siRNA (m): sc-37097, Fibrinogen β shRNA Plasmid (h): sc-37096-SH, Fibrinogen β shRNA Plasmid (m): sc-37097-SH, Fibrinogen β shRNA (h) Lentiviral Particles: sc-37096-V and Fibrinogen β shRNA (m) Lentiviral Particles: sc-37097-V.

Molecular Weight of Fibrinogen β: 67 kDa.

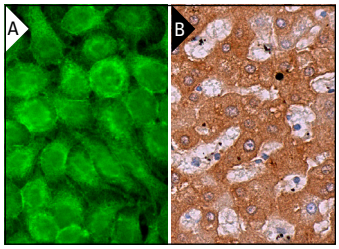
RECOMMENDED SUPPORT REAGENTS

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, 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 β (D-4) HRP: sc-271035 HRP. Direct western blot analysis of Fibrinogen β expression in human placenta (**A**), human plasma (**B**) and human liver (**C**) tissue extracts.



Fibrinogen β (D-4): sc-271035. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic and cell surface localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (**B**).

SELECT PRODUCT CITATIONS

1. Chen, X., et al. 2010. Quantitative organellar proteomics analysis of rough endoplasmic reticulum from normal and acute pancreatitis rat pancreas. J. Proteome Res. 9: 885-896.
2. Diaz Vera, J., et al. 2012. Chromogranins A and B are key proteins in amine accumulation, but the catecholamine secretory pathway is conserved without them. FASEB J. 26: 430-438.
3. Choi, J.W., et al. 2020. Proteome analysis of human natural killer cell derived extracellular vesicles for identification of anticancer effectors. Molecules 25: 5216.
4. 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.