

# Fibrinogen $\gamma$ (2.G2.H9): sc-81620

## BACKGROUND

The plasma glycoprotein Fibrinogen is synthesized in the liver and comprises three structurally different subunits:  $\alpha$ ,  $\beta$  and  $\gamma$ . 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: FGG (human) mapping to 4q31.3.

## SOURCE

Fibrinogen  $\gamma$  (2.G2.H9) is a mouse monoclonal antibody raised against amino acids 434-453 of Fibrinogen  $\gamma$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Fibrinogen  $\gamma$  (2.G2.H9) is recommended for detection of Fibrinogen  $\gamma$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

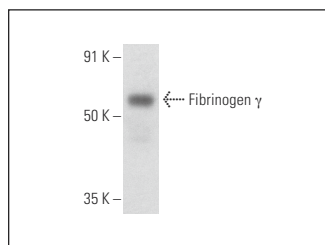
Molecular Weight of Fibrinogen  $\gamma$ : 57 kDa.

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

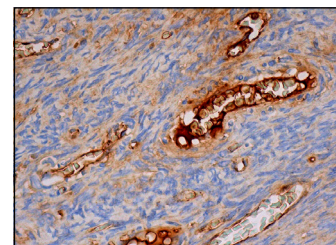
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Fibrinogen  $\gamma$  (2.G2.H9): sc-81620. Western blot analysis of Fibrinogen  $\gamma$  expression in Hep G2 whole cell lysate.



Fibrinogen  $\gamma$  (2.G2.H9): sc-81620. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of ovarian stroma cells and endothelial cells and extracellular staining of plasma.

## SELECT PRODUCT CITATIONS

1. de Lange, Z., et al. 2013. In black South Africans from rural and urban communities, the 4G/5G PAI-1 polymorphism influences PAI-1 activity, but not plasma clot lysis time. *PLoS ONE* 8: e83151.
2. Bouman, A.C., et al. 2016. Clot structure and fibrinolytic potential in patients with post thrombotic syndrome. *Thromb. Res.* 137: 85-91.
3. Cronjé, H.T., et al. 2017. Fibrinogen and clot-related phenotypes determined by fibrinogen polymorphisms: independent and IL-6-interactive associations. *PLoS ONE* 12: e0187712.
4. Rautenbach, P.H., et al. 2020. The association of alcohol with circulating total Fibrinogen and plasma clot density is mediated by Fibrinogen and FXIII genotypes. *Thromb. J.* 18: 35.
5. Lentz, S., et al. 2022. Structure-property relationship based on the amino acid composition of recombinant spider silk proteins for potential biomedical applications. *ACS Appl. Mater. Interfaces* 14: 31751-31766.
6. de Vries, J.J., et al. 2023. Levels of fibrinogen variants are altered in severe COVID-19. *TH Open* 7: e217-e225.

## 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.