



# Fibrinogen (GMA-035): sc-65966

## 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., Fujikawa, K. and Kisiel, W. 1991. The coagulation cascade: initiation, maintenance, and regulation. *Biochemistry* 30: 10363-10370.
3. Danesh, J., Collins, R., Appleby, P. and Peto, R. 1998. Association of Fibrinogen, C-reactive protein, Albumin, or leukocyte count with coronary heart disease: meta-analyses of prospective studies. *JAMA* 279: 1477-1482.
4. Lowe, G., Rumley, A., Norrie, J., Ford, I., Shepherd, J., Cobbe, S., Macfarlane, P. and Packard, C. Blood rheology, cardiovascular risk factors, and cardiovascular disease: the west of Scotland coronary prevention study. *Thromb. Haemost.* 84: 553-558.
5. Reinhart, W.H. 2003. Fibrinogen—marker or mediator of vascular disease? *Vasc. Med.* 8: 211-216.
6. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 34820. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. LocusLink Report (LocusID: 2243). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: FGA/FGB/FGG (human) mapping to 4q31.3.

## SOURCE

Fibrinogen (GMA-035) is a mouse monoclonal antibody raised against Fibrinogen of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Fibrinogen (GMA-035) is recommended for detection of whole Fibrinogen, consisting of a dimer of three pairs of non-identical chains,  $\alpha$ ,  $\beta$  and  $\gamma$ , of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000); may cross-react with fibrin degradation products.

Molecular Weight of Fibrinogen: 60 kDa.

## SELECT PRODUCT CITATIONS

1. Novotna, A., Dorcakova, A., Vrzal, R., Pavek, P. and Dvorak, Z. 2011. Construction and characterization of hepatocyte nuclear factor HNF4 $\alpha$ 1 over-expressing cell line derived from human hepatoma HepG2 cells. *Eur. J. Pharmacol.* 669: 45-50.
2. Novotna, A., Dorcakova, A., Pavek, P. and Dvorak, Z. 2013. Construction and characterization of peroxisome proliferator-activated receptor- $\gamma$  co-activator 1  $\alpha$  (PGC-1 $\alpha$  over-expressing cell line derived from human hepatocyte carcinoma Hep G2 cells). *Biomed. Pap. Med. Fac. Univ. Palacky Olomouc Czech. Repub.* 157: 214-221.
3. Abdel-Bakky, M.S., Aldakhili, A.S.A., Ali, H.M., Babiker, A.Y., Alhowail, A.H. and Mohammed, S.A.A. 2023. Evaluation of cisplatin-induced acute renal failure amelioration using fondaparinux and alteplase. *Pharmaceuticals* 16: 910.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.