

Anti-human Fibrinogen (C3) VHH



Yalelaan 40
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Properties

Product type:	VHH
Catalog number:	F-001
Clone number:	C3
Immunogen:	Purified human fibrinogen
Reacts with:	Human fibrinogen
Tested applications:	ELISA, Flow cytometry
Source:	Recombinant monoclonal VHH (<i>Llama glama</i>), purified from HEK293-E 253 cells using affinity chromatography
Clonality:	Monoclonal
Purity:	IMAC purified with Nickel excel Sepharose, >98%
Storage buffer:	PBS
Form:	Liquid
Concentration:	5.2 mg/ml
Storage:	Store at -80°C

Products

Cat. No.	Target	Clone	Form	Applications	Size
F-001	Human fibrinogen	C3	Purified	ELISA, FC	250 µg

Description

Fibrinogen (coagulation factor I) is a glycoprotein complex that circulates in the blood of vertebrates. It consists as a dimer of 3 pairs of non-identical chains, A α , B β and γ , which are cross-linked by disulfide bonds in their N-terminal segments. Additionally, the molecule has 2 terminal D domains and one central E domain. Fibrinogen circulates as a soluble plasma glycoprotein with a typical molecular weight of ~340 kDa. The normal concentration of fibrinogen in blood plasma is 150 - 400 mg/dL. Fibrinogen has a circulating half-life of ~4 days.¹⁻³

During tissue and vascular injury, fibrinogen is converted enzymatically by thrombin to form individual fibrin strands by attacking the N-terminus of the A α and B β chains. The individual fibrin strands polymerize and are crosslinked by blood coagulation factor XIIIa to form an extensive interconnected fibrin network, which forms the basis for the formation of a mature fibrin clot.⁴ In addition to forming fibrin, fibrinogen also functions as a bridge between blood platelets through binding to integrin α IIb β 3 (also termed glycoprotein GPIIb/IIIa), the surface-expressed fibrinogen receptor.⁵ Moreover, fibrinogen and/or fibrin mediate blood platelet and endothelial cell spreading, tissue fibroblast proliferation, capillary tube formation, and angiogenesis and thereby promote revascularization and wound healing.^{6,7}

Fibrinogen is an acute-phase protein, meaning that its blood levels rise in response to systemic inflammation, tissue injury, and certain other events, including pregnancy. It is also elevated in various cancers. Elevated levels of fibrinogen in inflammation as well as cancer and other conditions have been suggested to be the cause of thrombosis and vascular injury that accompanies these conditions.⁸ Reduced levels and/or dysfunctional fibrinogen occur in various congenital and acquired human fibrinogen-related disorders, representing a group of rare conditions in which individuals may present with severe episodes of pathological bleeding and thrombosis.^{9,10}

Use, storage and stability

Anti-human fibrinogen (C3) VHH is suitable for use in ELISA and flow cytometry studies. C3 does not block the binding of fibrinogen to integrin α IIb β 3 (glycoprotein IIb/IIIa).

After thawing, C3 should be stored in appropriate small aliquots at -20°C or -80°C (stable for at least 6 months) or at 4°C for short time storage.

References

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