Product Datasheet [G-001]

Anti-human GPIb alpha (GpIb-17) VHH

U-PACT
the platelet diagnostics company

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Properties

Product type:	VHH
Catalog number:	G-001
Clone number:	GpIb-17
Immunogen:	Purified recombinant human glycoprotein Ib alpha (GPIbα)
Reacts with:	Human glycoprotein Ib alpha (GPIbα)
Tested applications:	ELISA, Flow cytometry
Source:	Recombinant monoclonal VHH (*Llama glama*), 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:	4.3 mg/ml
Storage:	Store at -80°C

Products

Cat. No.	Target	Clone	Form	Applications	Size
G-001	Human GPIb alpha	GpIb-17	Purified	ELISA, FC	250 µg

Description

Glycoprotein Ib alpha (GPIbα), also known as CD42, is a transmembrane protein of 135 kDa. Together with GPIbβ, GPIX and GPV, it forms the non-covalent GPIb-V-IX complex on megakaryocytes and platelets.[1-3] GPIbα is present at 25.000 copies per platelet. Platelet activation is accompanied by a transient clearance of GPIb from the platelet surface, which is followed by a slow reappearance to a normal surface expression level within 30 to 60 min. Also, deficiency of a single subunit dramatically decreases the surface expression of the whole complex.

The GPIb-V-IX complex functions as a receptor for von Willebrand factor, allowing platelet adhesion and platelet plug formation at sites of vascular injury.[4] Additionally, GPIb contains a binding site for P-selectin, Mac-1, coagulation factor XI and XII, thrombin and high molecular-weight kininogen. Hence, GPIb is an omnivalent receptor that links primary and secondary hemostasis.[2,5-8]

Defects in the gene encoding for GPIbα, in addition to the genes for GPIbβ and GPIX, give rise to a serious bleeding diathesis, which is accompanied by morphological platelet anomalies, including giant platelets. Collectively, this is defined as Bernard-Soulier Syndrome (BSS), a rare hereditary thrombocytopathy.[4,8]
A gain-of-function mutation causes platelet-type von Willebrand disease.[9]

Use, storage and stability

Anti-human GPIbα (GpIb-17) VHH is suitable for use in ELISA and flow cytometry studies. GpIb-17 is directed against the N-terminal leucine-rich repeats within GPIb alpha, and as a result interferes with the binding of vWF to GPIbα.

After thawing, GpIb-17 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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