

Product Sheet



QVQ

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Yalelaan 1
3584 CL Utrecht
The Netherlands
+31 30 253 3421

www.qvquality.com
KvK: 30274082
VAT: 8215.17.168
NL88 RAB00153194936

Glycoprotein VI

Catalogue no.: Q116
Clone name: S_D2

Product: VHH directed against human glycoprotein VI

Target: Glycoprotein VI (GPVI, GP6) is a platelet membrane glycoprotein of the immunoglobulin superfamily and a receptor for collagen. It is involved in collagen-induced platelet adhesion and activation.¹ Ligand binding to GPVI initiates migration to lipid rafts and subsequent dimerization of GPVI, the formation of a signaling complex with the FcR gamma chain, and the recruitment of downstream signaling proteins, including Src family kinases Fyn and Lyn and the adapter protein LAT.² This results in thrombus formation via activation of phospholipase C gamma 2.³ Transduction of signals by GPVI is mediated in an immunoreceptor-based manner and involves its immune-receptor tyrosine-based activation motif (ITAM). GPVI also binds fibrinogen and fibrin, resulting in the support of growth and stabilization of the thrombus.⁴ Mutations in the gp6 gene cause bleeding disorder platelet-type 11 (BDPLT11), characterized by defective platelet activation and aggregation in response to collagen.⁵ Also, platelets may be deficient of GPVI due to inherited or acquired loss of the protein, the latter through i.e. autoantibody-induced receptor shedding.⁵

Source: Immunization with and phage-display selection on purified recombinant human GPVI.
Recombinant bivalent VHH (Llama glama), purified from HEK293-E 253 cells using rmp-Protein A affinity chromatography.

Specificity: Human GPIV.
S_D2 blocks collagen-induced platelet activation, GPVI-mediated fibrinogen binding and P-selectin expression and blocks collagen-induced platelet aggregation.

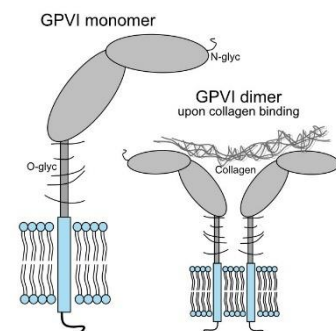
Formulation: Tagless VHH in PBS.

Mol. Weight: 28.1 kDa
Ext. Coeff. (ε): 49175 M⁻¹ cm⁻¹
A₂₈₀ at 1g/L: 1.8

Storage: Shipped on blue ice. Store at 4 °C or -20 °C (aliquots). Addition of 0.02% sodiumazide is optional.

Applications: ELISA, flow cytometry (FC)

Note:
This product has been generated
and purified by Podiceps BV.



References:

- 1 Moroi and Jung (1997) Thromb Haemost., 78(1):439-44
- 2 Arthur et al. (2007) J Biol Chem, 282(42):30434-41
- 3 Watson et al. (2010) J Thromb Haemost. 8(7):1456-67
- 4 Munnix et al. (2005) Arterioscler Thromb Vasc Biol 12:2673-8
- 5 Arthur et al. (2007) Br J Haematol 139(3):363-72