Product Sheet

QVQ
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Immunoglobulin Fc domain

Catalogue no.:	Q96c
Clone name:	QFC-1F5

Product: VHH directed against Fc-domain

Target: Immunoglobulin gamma (IgG) is the most abundant class of immunoglobulins in human plasma (10-20% of plasma proteins). The protein consists of two heavy chains and two light chains, forming a structure connected by the hinge region with two target binding arms (Fab domains when separate, or F(ab')2 when connected via the hinge) and a constant region (Fc). The constant region contains sites for binding to immune receptors and proteins with amongst others the Fcγ-receptors (FcγR) (myeloid cells),2 C1q (complement system), and FcRn (IgG transport and half-life). IgG is present in four subclasses, in order of abundance the IgG1, IgG2, IgG3, and IgG4, with 90% similarity between each subclass. Each subclass has their own characteristics and function in the immune response. Immunoglobulins are widely used as molecular tools in biochemical and immunological research. Detection of Fc domains is required for assay development.[1-3]
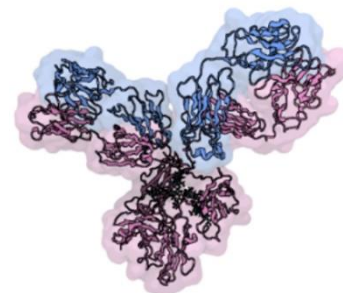
Source: Recombinant monoclonal VHH (Llama glama), purified from S.cerevisiae using affinity chromatography. Immunization and phage-display selection on immobilized recombinant human IgG Fc domain.

**Specificity:** Human and cyno immunoglobulin 1, 2 and 4 Fc domain.

Formulation: 0.2 µm filtered solution in PBS. The products are equiped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

Mol. Weight: 15.3 kDa
Ext. Coeff. (ε): 27515 M^{-1} cm^{-1}
A_{280} 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, IF

Examples:
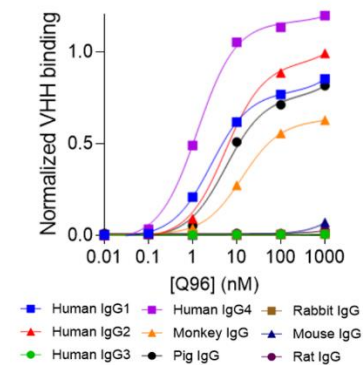
Binding of Q96 to Fc domains from different immunoglobulins (left) and isolated Fc domain but not Fab2 domains (right) by ELISA. Bound VHH was detected via its C-terminal FLAG tag using mouse-anti-FLAG (M2).

References:
1 Vidarsson, G., Dekkers, G., & Rispens, T. (2014) Frontiers in Immunology, 5, 520
2 Nimmerjahn, F., Gordan, S., & Lux, A. (2015) in Immunology, 36(6), 325–336
3 Bruhns, P., & Jönsson, F. (2015) Immunological Reviews, 268(1), 25–51