

Product Sheet



QVQ

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HIV surface protein gp120

Catalogue no.: Q1c
Clone name: J3

Product: VHH directed against HIV gp120
Target: HIV-1 is an enveloped RNA lentivirus from the retroviridae family 1. The surface of virus expresses trimeric mushroom-shaped, HIV-1-Env glycoprotein complexes that facilitate virus uptake via interaction with CD4 and CCR5 or CXCR4 on host cells. Env is a glycosylated trimer of non-covalently linked gp120 and gp41 (UniprotKB Q53119), formed upon proteolytic cleavage of the precursor gp160.¹⁻⁶

Source: Recombinant monoclonal VHH (Llama glama), purified from *S.cerevisiae* using affinity chromatography. Immunization with recombinant proteins. Phage-display selection on captured recombinant protein using competitive or total elution.

Specificity: Q1 (J3) and Q3 (3E3) bind to the CD4 binding site on gp120. Q7 (1B5) and Q53 (1H9) bind near the bridging sheet, the V3 loop and the CD4 binding loop. Q9 (1F10) binds the V3 loop of gp120.^{7,8}

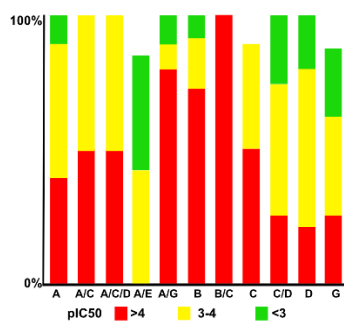
Formulation: 0.2 µm filtered solution in PBS. The products are equipped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

Mol. Weight: 15.2 kDa
Ext. Coeff. (ε): 24535 M⁻¹ cm⁻¹
A₂₈₀ at 1g/L: 1.6

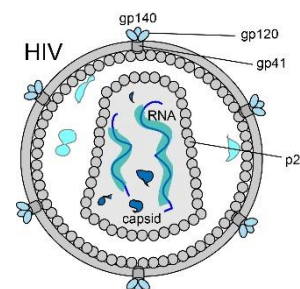
Storage: Shipped on blue ice. Store at 4 °C or -20 °C (aliquots). Addition of 0.02% sodiumazide is optional.

Applications: ELISA, virus neutralization

Examples:



Broad HIV-1 neutralisation by Q1 (J3).⁶



References:

- 1 Ganser-Pornillos B.K. et al. (2008) *Curr Opin Struct Biol* 18:203-217
- 2 Bell N.M. and Lever A.M. (2013) *Trends Microbiol* 21:136-144
- 3 de Marco A. et al., (2010) *PLoS Pathog* 6:e1001215
- 4 Tamamura et al., (2005) *Curr HIV res* 3, 289-301
- 5 Hallenberger et al., (1992) *Nature* 360, 358-361
- 6 McCoy et al., (2012) *J Exp Med* 209, 1091-1103
- 7 Strokappe et al., (2012) *PLoS One*, doi: 10.1371
- 8 Lutje Hulsik et al., (2013) *PLoS Pathog*, doi: 10.1371