Product Sheet

QVQ
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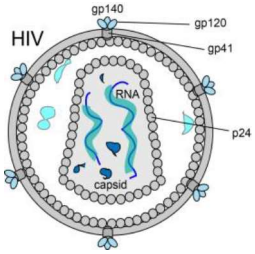
HIV surface protein gp120

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-covalenlty linked gp120 and gp41 (UniprotKB Q53I19), 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]

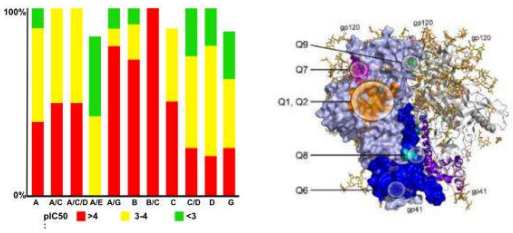
Formulation: 0.2 µm filtered solution in PBS.

Mol. Weight: 15.2 kDa
Ext. Coeff. (ε): 24535
A_{280} 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). Binding epitopes of Q1-9 to the gp160 trimer.

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