Product Sheet

QVQ
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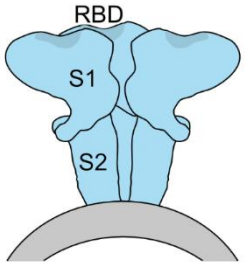
SARS-CoV-2 spike protein

Catalog no.: Q104c
Clone name: QCV-1C3

Product: Single-domain antibody directed against SARS-CoV-2 spike protein



Target: The disease COVID-19 is caused by the virus SARS-CoV-2 and responsible for the global pandemic starting in 2020. SARS-CoV-2 is a spherical-shaped positive-strand RNA virus.[1] The SARS-CoV-2 spike protein (S protein) is a homotrimeric transmembrane glycoprotein that is one of the major protein complexes on the virus and which plays an important role in infection into host cells.[2] Each spike protein monomer is a 140 kDa protein with an N-terminal S1 domain, a membrane-proximal S2 domain, a transmembrane domain, and a C-terminal domain.[2] Via the receptor binding domain (RBD) within the S1 domain, the spike proteins bind to Angiotensin-Converting Enzyme 2 (ACE2) receptors on host cells, which is then followed by fusion of the virus with the membrane.[2] By interfering with the interaction of the RBD with ACE2, infection can be blocked.[3] Therefore, S1 and RBD in particular, is an interesting therapeutic target for COVID-19.[3]

Source: Recombinant monoclonal single-domain antibody (Lama glama), purified from *S. cerevisiae* using affinity chromatography. Immunization with and phage-display selection on recombinant protein using total elution.

Specificity: SARS-CoV-2 spike protein domain S1.

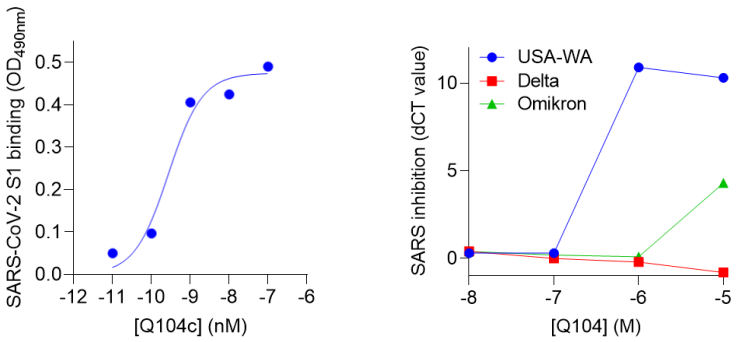
Formulation: 0.2 µm filtered solution in PBS. The products are equipped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

Mol. Weight: 14.1 kDa
Ext. Coeff. (ε): 21555 M^{-1} cm^{-1}
A_{280} at 1g/L: 1.5

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

Applications: ELISA, viral neutralisation.

Examples:



Left: Binding of Q104c to recombinant SARS-CoV-2 spike protein in ELISA. Right: Inhibition of SARS-CoV-2 infection by Q104.

References:

1 Sharma et al., (2021) Viruses. 13(2):202
2 Khailany et al., (2020) Gene Reports. 100682
3 Walls et al., (2020) Cell. 180:281–292
4 Salvatori et al., (2020) J Transl Med 18:222