Product Sheet

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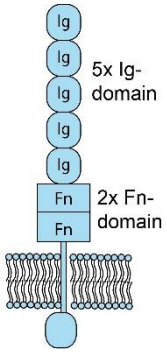
Neural Cell Adhesion Molecules 1 (NCAM-1)

Catalogue no.: Q55c
Clone name: FSH-10B10

Product: VHH directed against NCAM

Target: The Neural Cell Adhesion Molecule 1 (NCAM-1, UniProtKB P13591) is a glycoprotein expressed on the membranes of neurons, glia and muscle cells. However, it is also found to be expressed in cells of the immune system (NK cells, T-cells and dendritic cells). There are 4 types of NCAM-1 of which one variant is soluble, while the others or linked to the plasma mebrane via a GPI-anchor (120 kDa) or via a transmembrane domain (140 and 180 kDa). All types contain the 5x Ig-like domains and 2x Fn-like domains. NCAM-1 functions in cell-cell adhesion via binding to extracellular matrix protein agrin and several proteoglycans. In addition, its functioning is regulated via attachement of polysialylic acid to NCAM, generating PSA-NCAM.[1-4]



Source: Recombinant monoclonal VHH (Llama glama), purified from S.cerevisiae using affinity chromatography. Immunization with FSHD patient material. Phage-display selection on cells and captured ectodomain with total elution.

Specificity: Human NCAM-1.[5]

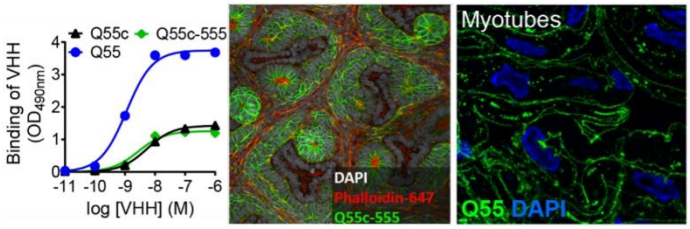
Formulation: 0.2 µm filtered solution in PBS. The products are equiped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

Mol. Weight: 14.8 kDa
Ext. Coeff. (ε): 31065 M^{-1} cm^{-1}
A_{280} at 1g/L: 2.1

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

Applications: ELISA, IF, FACS, imaging

Examples:



Binding of Q55, Q55c and Q55c-Hylite555 to recombinant NCAM-1 in ELISA (left), to NCAM-1 in myotubes in IF (middle) and embryonic renal tissue (right).[5]

References:

1 Dickson et al. (1987) Cell, 50, 1119-1130
2 Rutishauser et al. (1982) PNAS, 79, 685-689
3 Kasper et al. (2000) Nat Struct Biol, 7, 389-393
4 Hildebrandt et al., (2010) Adv Exp Med Biol, 663, 95-109
5 van Ineveld et al., (2021) Nat Biotechnology, 39, 1239-1245