Product Sheet

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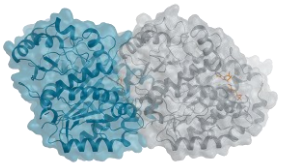
Tubulin

Catalog no.: Q128c
Clone name: VHHmm, VHH#2

Product: VHH directed against tubulin

Target: Tubulin proteins are essential components of the cytoskeleton in cells. Tubulin exists mainly as two closely related globular proteins, α-tubulin and β-tubulin, which polymerize into dynamic microtubules.[1] Microtubules are involved in various cellular processes, including cell division, intracellular transport, and maintenance of cell shape.[2] Additionally, tubulin's role in intracellular transport is vital for the movement of organelles and vesicles within cells.[3] Understanding tubulin function is key to developing treatments for diseases like cancer, where cell division is dysregulated.



Alpha (blue) and beta (grey) chains of tubulin.

Source: Recombinant monoclonal VHH (Llama glama), purified from *S. cerevisiae* using affinity chromatography. Immunization with MCF7 cells[4] and phage-display selection on bovine brain tubulin using total elution.[5]

Specificity: Tubulin.

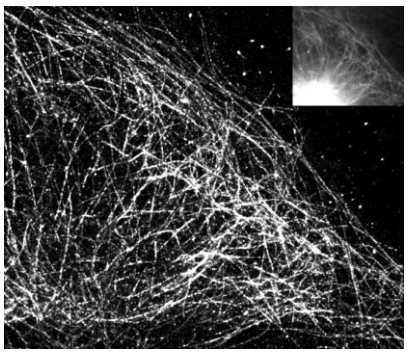
Formulation: 0.2 µm filtered solution in PBS. The products are equiped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

Mol. Weight: 14.6 kDa
Ext. Coeff. (ε): 28545
A_{280} at 1g/L: 1.95

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

Applications: ELISA, IF, super resolution microscopy

Examples:



Binding of Q128c to tubulin fibers, as imaged using dSTORM superresolution microscopy.

References:

1 Nogales et al., (1998) Nature. 391, 199–203
2 Akhmanova and Kapitein, (2022) Nat Rev Mol Cell Biol. 23(8), 541-558
3 Jaworski, Hoogenraad and Akhmanova (2008) Int J Biochem Cell Biol. 40(4):619-37
4 Kijanka et al., (2013) Eur. J. Nucl. Med. Mol. Imag. 40(4):1718
5 Mikhaylova et al., (2015) Nat Commun. 6:7933