Product Sheet

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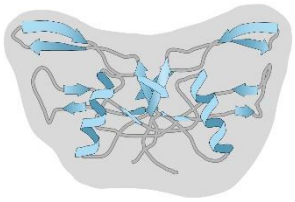
Bone Morphogenetic Protein 2/4 (BMP2/4)

Catalogue no.: Q36bc
Clone name: 16C8-16C8

Product: VHH directed against BMP2/4



Target: Bone Morphogenetic Proteins (BMPs) are TGF-β-like secreted signaling molecules that play important roles in tissue homeostasis and diseases, such as cancer. Although different, BMP2 (UniProtKB P12643) and BMP4 (UniProtKB P12644) originate from the same gene and show >80% sequence homology. Both BMP2 and BMP4 preferentially bind to the type I BMP receptors, BMPR1A (Alk3) and BMPR1B (Alk6), but can also signal through ActRI (Alk2).[1-3]

Source: Recombinant bivalent VHH (Llama glama), purified from S.cerevisiae using affinity chromatography. Immunization with recombinant BMP4. Phage-display selection on immobilized BMP4 with total elution.[4]

Specificity: Human BMP2 and BMP4. Q36 binds to the 'wrist hydrophobic groove' on BMP4a, hereby preventing binding of BMP4 to its receptor BMPR1a. Q35 and Q36 bind non-overlapping epitopes.[4,5]

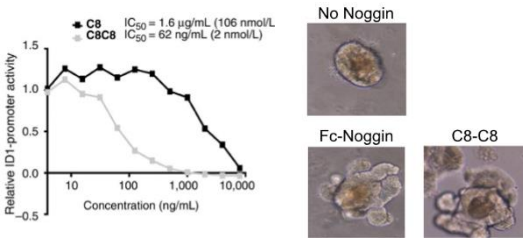
Formulation: 0.2 µm filtered solution in PBS. The products are equiped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

Mol. Weight: 29.3 kDa
Ext. Coeff. (ε): 41620 M^{-1} cm^{-1}
A_{280} at 1g/L: 1.4

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

Applications: ELISA, Inhibition of signaling

Examples:



Inhibition of BMP2- and 4-mediated activation of C2C12 cells by Q36b (C8C8) and Q36-medated formation of intestinal organoids similar to those formed by treatment with BMP inhibitor Noggin.[4]

References:

1 Hogan, BL., (1996) Genes Dev. 10:1580-1594
2 McCauley and Bronner-Fraser, (2004) Evol Dev. 6:411-422
3 Miyazono et al., (2005) Cytokine Growth Factor Rev. 16:251-263
4 Calpe et al., (2015) Mol Cancer Ther 14:2527-40
5 Calpe et al., (2016) MAbs 8:678-688