

Product Sheet



QVQ

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Bone Morphogenetic Protein 4 (BMP4)

Catalogue no.: Q35bc
Clone name: 16C4-16C4

Product: VHH directed against BMP4
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 BMP4. Q35 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}

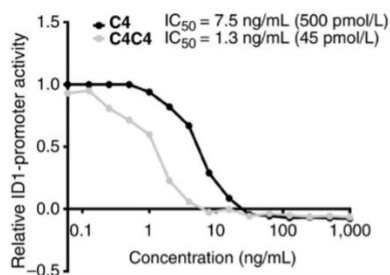
Formulation: 0.2 μ m filtered solution in PBS. The products are equipped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

Mol. Weight: 28.8 kDa
Ext. Coeff. (ϵ): 47580 M⁻¹ cm⁻¹
A₂₈₀ at 1g/L: 1.7

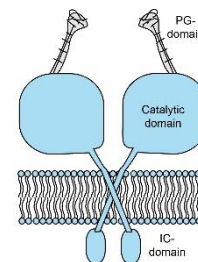
Storage: Shipped on blue ice. Store at 4 °C or -20 °C (aliquots). Addition of 0.02% sodiumazide is optional.

Applications: ELISA, Inhibition of signaling

Examples:



Inhibition of BMP4-mediated activation of C2C12 cells by Q35b (C4C4).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