

Bone Morphogenetic Protein 4 (BMP4)

Catalogue no.: Q35
Clone name: 16C4-16C4
Product: VHH directed against Bone Morphogenetic Protein 4

Target: Bone Morphogenetic Protein 4 (BMP4) (UniProtKB [P12644](#)) is a TGF- β -like secreted signaling molecule from the BMP family. BMPs play important roles in tissue homeostasis and diseases, such as cancer. During embryonic development, BMPs are involved in cell proliferation, differentiation, apoptosis and fate determination.¹ Although different, BMP2 and BMP4 originate from the same gene and show >80% sequence homology.² Both BMP2 and BMP4 preferentially bind to the type I BMP receptors, BMPR1A (Alk3) and BMPR1B (Alk6), but can also signal through ActRI (Alk2).³

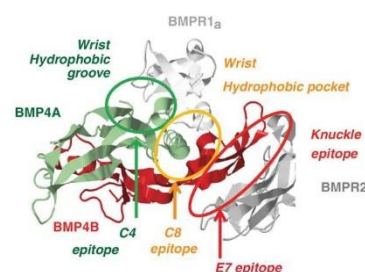


Figure 1. Structure of BMP4A and B and the putative epitope of Q35 (C4, green), which prevents binding of BMP4 to BMPR1a.⁴

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

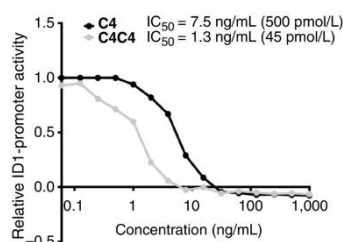
Specificity: Human BMP4. Q35 binds to the 'wrist hydrophobic groove' on BMP4a, hereby preventing binding of BMP4 to its receptor BMPR1a.^{4,5}

Formulation: 0.2 μ m filtered solution in PBS.

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 Q35 (C4C4).⁴

Products:

Cat. No.	Target	Tag	Label
Q35	BMP4	Tagless	No label
Q35c	BMP4	C-direct	No label
Q35c-lab	BMP4	C-direct	Biotin / NOTA / HiLyte488 / IRDye800CW

References:

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