

## Recombinant bovine BMP-4 protein (Qk135)



**Type:** Stem cells

**Available for purchase:** Unit Size (µg): 25, 50, 100, 500, 1000

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### Product Information

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BMP-4 (bone morphogenetic protein 4) is a key regulator of embryogenesis and supports the differentiation of embryonic stem cells and induced [pluripotent](#) stem cells. In addition, BMP-4 protein plays roles in the differentiation of mesenchymal cells to adipocytes, epithelial cancer EMT, and regulating [neuronal and glial cell](#) development.

Qkine BMP-4 is a highly pure, [animal origin-free](#) and carrier protein-free 24 kDa disulfide-linked bioactive dimer comprised of the mature domain of bovine BMP-4 protein.

#### Alternative protein names

Bone morphogenetic protein 4, Bone morphogenetic protein 2B, BMP-2B, BMP2B, DVR4, BMP4, BMP 4

#### Product Size Wording

500 ug shipped as 5 x 100 ug | 1000 ug shipped as 10 x 100 ug

#### Molecular weight

24 kDa (dimer)

#### Protein Uniprot number

High purity optimized human BMP-4 protein (Uniprot: Q2KJH1)

#### Species reactivity

- bovine
- species similarity:
- human - 100%
- mouse - 98%
- rat - 98%
- porcine - 99%

### **Product Information**

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Lyophilized from acetonitrile, TFA

### **Reconstitution instructions**

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

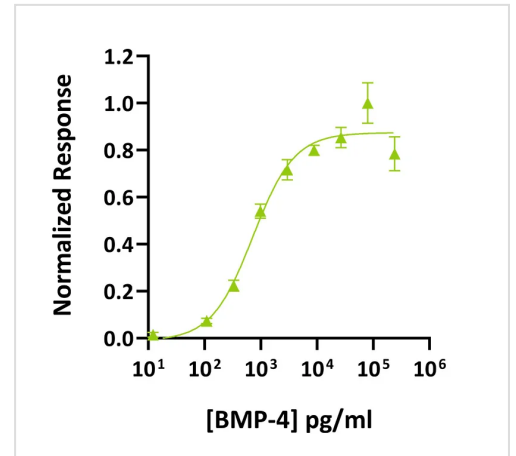
### **Further quality assays**

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

## Scientific Information

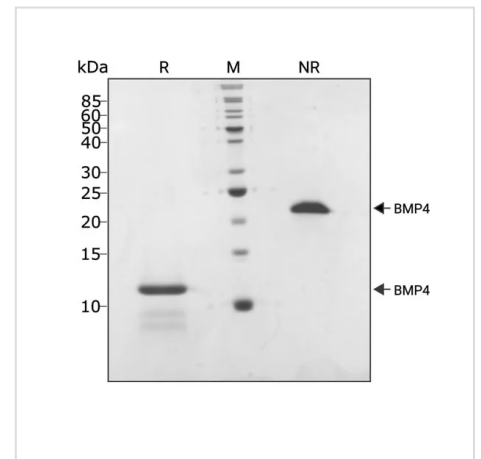
### Bioactivity

BMP-4 activity was determined using the BMP4-responsive firefly luciferase reporter assay in transfected HEK293T cells. Cells were treated in triplicate with a serial dilution of BMP-4 for 6 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. EC50 = 30.2 pM (0.72 ng/ml).



### Purity

BMP-4 dimer migrates as a single band at 24 kDa in non-reducing (NR) and 13 kDa as a single monomeric species upon reduction (R). High purity yield of dimeric protein (bioactive form). Purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced conditions (NR) and stained with Coomassie Brilliant Blue R250.



**Original product page:** <https://qkine.com/product/recombinant-bovine-bmp-4-protein-qk135/>

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