

Recombinant mouse/rat BMP-2 protein (Qk009)



Type: Stem cells

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

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Product Information

Bone morphogenetic protein 2 (BMP-2) is member of the [TGF-β family](#) and a key regulator of embryogenesis and potent differentiation factor of embryonic stem cells (ESC) and induced pluripotent stem cells (iPSC) towards endoderm fates. BMP-2 plays roles in the differentiation of mesenchymal cells to adipocytes, epithelial cancer EMT, chondrogenesis and regulation of neuronal and glial cell development.

Qkine recombinant mouse/rat BMP-2 is a 26 kDa disulfide-linked bioactive highly pure dimer comprised of the mature domain of the BMP-2 protein, [animal origin-free](#) (AOF) and carrier protein-free.

Alternative protein names

Bone morphogenetic protein 2, BDA2, SSFSC, BMP-2A, BMP-2, BMP2, Bone morphogenetic protein 2A, Qk9, Qk09

Molecular weight

26 kDa (dimer)

Protein Uniprot number

High purity BMP-2 (Uniprot: P21274)

Species reactivity

- mouse

- rat
- species similarity:
- human - 100%
- bovine - 100%
- porcine - 100%

Product Information

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

Reconstitution instructions

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

Featured applications

- Generation of iPSC-derived osteoblasts and chondrocytes
- Growth and proliferation of chondrocytes, fibroblasts and primary cells
- Neural stem cell proliferation and neuronal differentiation
- Stem cell differentiation into neural and microglial lineages

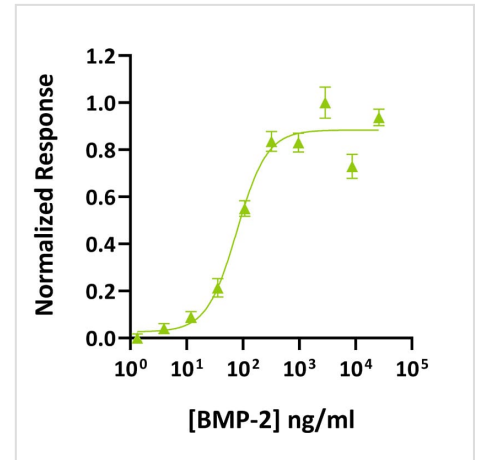
Further quality assays

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

Scientific Information

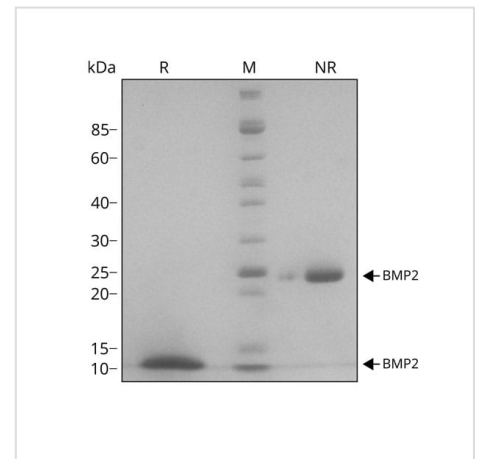
Bioactivity

BMP-2 activity was determined using the BMP-2 responsive firefly luciferase reporter assay in stably transfected HEK293T cells. Cells were treated in triplicate with a serial dilution of BMP-2 for 6 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. EC50 = 7.8 ng/ml (0.3 nM). Data from lot #010.



Purity

BMP-2 migrates as a single band at 26 kDa in non-reducing (NR) conditions and 13 kDa as a single monomeric species upon reduction (R). No contaminating protein bands are visible. Purified recombinant protein (7 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://ryan.calliope-alpha.ts.net/product/recombinant-mouse-rat-bmp-2-protein-qk009/>

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