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Recombinant human BMP-2 protein (Qk007)



Type: Stem cells

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

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Product Information

Human recombinant BMP-2 protein (bone morphogenetic protein 2) protein 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 BMP-2 is a 26 kDa disulfide–linked bioactive highly pure dimer comprised of the mature domain of human BMP-2 protein, animal origin-free (AOF) and carrier protein-free.

This protein is also available as GMP compliant Cell Therapy Grade, to enquire email support@qkine.com.

Alternative protein names

Bone morphogenetic protein 2,BDA2, SSFSC, BMP-2A, BMP-2, BMP2, Bone morphogenetic protein 2A, Qk7, Qk07

Molecular weight

26 kDa (dimer)

Protein Uniprot number

High purity human bone morphogenetic protein 2, BMP-2 (Uniprot: P12643)

Species reactivity

- human
- species similarity:
- mouse - 100%
- rat - 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

- Differentiation of human pluripotent stem cells towards extra-embryonic endoderm, mesenchymal, neural lineages, and chondrocytes
- Neural stem cell proliferation and neuronal differentiation
- Stem cell differentiation into neural and microglial lineages

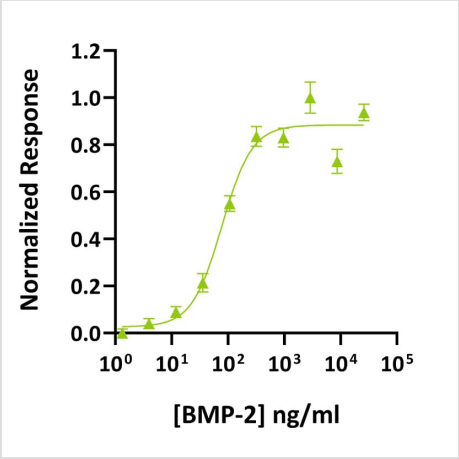
Further quality assays

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

Scientific Information

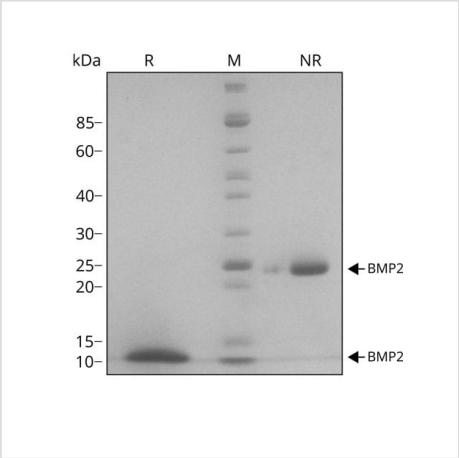
Bioactivity

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 Qk007 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-mercaptothanol, R) and non-reduced conditions (NR) and stained with Coomassie Brilliant Blue R250. Data from Qk007 lot #010.



Original product page: https://qkine.com/product/recombinant-human-bmp2-protein/

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