

Technical Data Sheet

Recombinant human BMP-4 protein



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Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxcell.com/terms-and-conditions>.

Lot Specific Information

Lot Number: Lot Specific*

Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Website Link: <https://bioxcell.com/recombinant-human-bmp-4-protein-rp011>

Product Information

Catalog Number:	RP011
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Recommended Dilution Buffer:	InVivoPure Reconstitution Buffer A
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	24 kDa (dimer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human BMP-4 protein (bone morphogenetic protein 4) is a member of the TGF- β superfamily and a key regulator of embryogenesis, with essential roles in gastrulation, dorsal-ventral axis formation and limb development, as well as bone and cartilage metabolism, neurogenesis and hematopoietic stem cell homing in adults. BMP-4 signals through the serine-threonine kinase receptors BMPRI and BMPRII to activate Smad and MAP kinase pathways and alter target gene transcription. In cell culture, recombinant BMP-4 is an essential growth factor for differentiating induced pluripotent stem cells (iPSCs) and embryonic stem cells toward mesoderm and onward to cardiac and stromal cells, and it is widely used in stem cell and organoid protocols, including choroidal, melanocyte and intestinal differentiation, as well as in spinal organoids where it shapes dorsal neural tube cell-type patterning. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. Species reactivity: human. Species similarity: mouse - 98%, rat - 98%, bovine - 99%, porcine - 99%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

Bio X Cell, LLC

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.

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