Technical Data Sheet

Recombinant human/mouse FGF-2 (154 aa) protein

bioxcell.com

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 Information

Catalog Number:	**RP050**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Induced pluripotent and embryonic stem cell differentiation and maintenance
Formulation:	Lyophilized, white powder
Endotoxin:	≤13.6 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water 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:	17 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human/mouse FGF-2 (154 aa) protein, also known as basic fibroblast growth factor (bFGF), is a member of the fibroblast growth factor (FGF) family, which comprises 18–22 human members in 6–7 subfamilies and regulates cell proliferation, survival, migration and differentiation. FGF-2 is one of the FGFs that binds and signals through all four transmembrane tyrosine kinase receptors (FGFR1–4), which recruit SH2- or PTB-domain signaling proteins to activate the RAS/MAP kinase, PI3 kinase/Akt and PLCγ pathways. FGFs play critical roles in embryonic development and, in adults, modulate tissue maintenance, wound healing and angiogenesis. FGF-2 is an essential growth factor for maintaining pluripotency in human embryonic stem cells (ESCs), induced pluripotent stem cells (iPSCs) and mesenchymal stem cells (MSCs), preserving stemness through PI3K/Akt, ERK1/2, JAK/STAT and PLCγ signaling and activin A activation, and in feeder systems it stimulates production of essential growth factors and cytokines from the feeder layer. Together with TGF-β1, FGF-2 is required for feeder-free iPSC maintenance, and this high-quality, bioactive and animal origin-free FGF-2 is a key reagent for stem cell culture. 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. A GMP-grade version of this protein is available for cell and gene therapy manufacturing. Contact us at customerservice@bioxcell.com for details. Species reactivity: human. Species similarity: mouse - 94%, rat - 97%, 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
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.
Not for resale.
Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © Bio X Cell, LLC