

Technical Data Sheet

Recombinant human FGF-2 (145 aa) protein



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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-fgf-2-145-aa-protein-rp007>

Product Information

Catalog Number:	RP007
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 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 FGF-2 (145 aa) protein, also known as basic fibroblast growth factor (bFGF), is a member of the fibroblast growth factor (FGF) family that regulates cell growth, survival, proliferation, migration and differentiation. FGF-2 is unique in binding and signaling through all four FGF receptors (FGFR1–4), activating the RAS/MAP kinase, PI3K/Akt, JAK/STAT and PLCγ pathways. It 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 via PI3K/Akt, ERK1/2, JAK/STAT and PLCγ signaling and activin A activation, and it stimulates essential growth factor and cytokine production from feeder layers. Together with TGF-β1, FGF-2 is required for feeder-free iPSC maintenance; because native FGF-2 has poor thermostability in culture, this FGF2-G3 variant is engineered for high thermostability, enabling weekend-free iPSC culture without daily media changes. 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 - 97%, 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

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

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