Technical Data Sheet

Recombinant zebrafish FGF-2 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 Information

Catalog Number:	**RP033**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Stem cell expansion and maintenance
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.9 EU/mg, LAL assay
Purity:	≥95%; SDS-PAG
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 zebrafish FGF-2 protein, also known as basic fibroblast growth factor (bFGF), is a member of the fibroblast growth factor (FGF) family, a group of 18–22 members grouped into 6–7 subfamilies that regulate cell proliferation, survival, migration and differentiation. FGF-2 is one of the FGFs that binds to and signals through all four tyrosine kinase FGF receptors (FGFR1–4), which recruit SH2- and PTB-domain signaling proteins to activate the RAS/MAP kinase, PI3 kinase/Akt and PLCγ pathways. FGF family members have critical roles in vertebrate and invertebrate embryonic development, and in adult cells they modulate tissue maintenance, wound healing and angiogenesis, while FGF-2 itself regulates cell growth, survival and proliferation. FGF-2 is an essential growth factor for maintaining pluripotency in embryonic stem cells (ESCs), induced pluripotent stem cells (iPSCs) and mesenchymal stem cells (MSCs), acting through PI3 kinase/Akt, ERK1/2, JAK/STAT and PLCγ signaling and activation of activin A, and in feeder culture systems it stimulates production of essential growth factors and cytokines from the feeder layer, making it a key reagent for stem cell culture research. 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: zebrafish. Cross-reactivity: human.

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

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

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