Technical Data Sheet

Recombinant tuna 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 Information

Catalog Number:	**RP095**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Expansion of tuna pluripotent, embryonic and mesenchymal stem cells Cellular agriculture and cultivated meat cell culture media optimization Serum-free media development Cellular proliferation, migration and survival
Formulation:	Lyophilized, white powder
Endotoxin:	≤1.6 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:	16.2 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant tuna FGF-2 (145 aa) protein, also known as basic fibroblast growth factor (bFGF), is a key member of the fibroblast growth factor family, a 145-amino-acid protein of around 16.2 kDa characterized by a disulfide-stabilized β-trefoil fold essential for its biological activity. FGF-2 plays pivotal roles in cell growth, differentiation and angiogenesis and is a significant growth factor in embryonic development, tissue repair and wound healing. In stem cell research, FGF-2 is a key component of culture media for maintaining the pluripotency and self-renewal of embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs), activating signaling pathways including MAPK to sustain expression of pluripotency-associated genes such as Oct4, Sox2 and Nanog, preventing differentiation and enabling in vitro expansion. FGF-2 can also be incorporated into scaffolds or hydrogels with stem cells to promote their proliferation and differentiation in a three-dimensional environment, and it holds great promise for the development of cultivated tuna protocols and serum-free media, making it a key reagent for cellular agriculture 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: tuna.

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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