Technical Data Sheet

Recombinant tuna FGF-2 (154 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:	**RP096**
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:	≤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 (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant tuna FGF-2 (154 aa) protein (fibroblast growth factor 2), also known as basic fibroblast growth factor (bFGF), is a 154-amino-acid, 17 kDa member of the fibroblast growth factor family that plays pivotal roles in cell growth, differentiation and angiogenesis and is a significant growth factor in embryonic development, tissue repair and wound healing. FGF-2 comprises multiple isoforms and adopts a β-trefoil fold stabilized by disulfide bonds, a structure essential for its biological activity. As a core component of stem cell culture media, FGF-2 maintains the pluripotency and self-renewal of embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs) by activating signaling pathways such as the mitogen-activated protein kinase (MAPK) pathway, which sustains expression of pluripotency-associated genes including Oct4, Sox2 and Nanog, prevents differentiation and allows expansion in vitro. It can also be incorporated into scaffolds or hydrogels together with stem cells to promote proliferation and differentiation within a three-dimensional environment, making tuna FGF-2 a valuable reagent for cultivated tuna protocols and serum-free media development in the cellular agriculture industry. 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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