Technical Data Sheet

Recombinant eel 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:	**RP097**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Expansion of eel pluripotent, embryonic and mesenchymal stem cells Serum-free media development Cellular agriculture and cultivated meat cell culture media optimization Cellular proliferation, migration and survival
Formulation:	Lyophilized, white powder
Endotoxin:	≤12.2 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:	16.4 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant eel 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 16.4 kDa that exists in multiple isoforms and is characterized by a β-trefoil fold stabilized by disulfide bonds essential for 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. FGF-2 is commonly used in cell culture media to maintain the pluripotency and self-renewal of embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs), where it activates signaling pathways including the MAPK pathway to sustain expression of the pluripotency-associated genes Oct4, Sox2 and Nanog, preventing differentiation and enabling expansion in vitro. Incorporated into scaffolds or hydrogels alongside stem cells, FGF-2 promotes proliferation and differentiation within a three-dimensional environment, an approach that holds great promise for developing cultivated eel protocols, making eel FGF-2 a key reagent for serum-free media development in cellular agriculture. 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: eel.

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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