Technical Data Sheet

Recombinant rat/mouse FGF-10 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:	**RP042**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Differentiation of embryonic stem cells into gut-like structures, cardiomyocytes and hepatocytes Epithelial to mesenchymal transition
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 rat/mouse FGF-10 protein (fibroblast growth factor 10) is a ~20 kDa mesenchyme-secreted growth factor, closely related to FGF-7 and bearing a serine-rich N-terminal region, that is bound and activated by extracellular FGF-BP and signals through the epithelial FGF receptor 2b (FGFR2b), with weaker binding to FGFR1b. During development, FGF-10 maintains FGF signaling with epithelial FGF-8 in the limb bud mesoderm, drives mesenchyme accumulation and induces the apical ectodermal ridge, and mediates the epithelial–mesenchymal signaling from foregut mesenchyme to epithelium that underlies lung development, and it contributes to the formation of white adipose tissue, heart, liver, brain, kidney, thymus, inner ear, tongue, trachea, eye, prostate, salivary and mammary glands. In cell culture, recombinant FGF-10 drives differentiation of embryonic stem cells into gut-like structures, cardiomyocytes and hepatocytes and is a potent organoid factor, increasing organoid size and branching compared with other FGFs. Rat FGF-10 shares 100% homology with human FGF-10, making it a key reagent for stem cell and organoid 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: rat. Species similarity: human - 100%, mouse - 94%, 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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