Technical Data Sheet

Recombinant human/mouse IGF-1 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:	**RP063**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Maintenance of pluripotency in iPSC Cell culture media optimization and replacement of insulin in defined media
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:	8 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human/mouse IGF-1 protein (insulin-like growth factor 1) is a member of the insulin-like growth factor family, structurally similar to insulin, with A and B chains connected by disulfide bonds that allow low-affinity binding to the insulin receptor. IGF-1 is a primary mediator of growth hormone (GH), exerting growth-promoting effects on most cells and tissues, including skeletal muscle, cartilage, bone, liver, kidney, nerve, skin, hematopoietic cells and lung. It acts through the IGF1 receptor (IGF1R) to activate the Ras-MAPK and PI3 kinase signaling pathways, increasing cell proliferation and survival, and its activity is modulated by a group of IGF binding proteins (IGFBPs) that tend to inhibit its effects. In cell culture, recombinant IGF-1 is used to support maintenance of human embryonic stem cell (ESC) and mesenchymal stem cell (MSC) cultures, making it a valuable growth factor for stem cell culture and growth signaling 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. A GMP-grade version of this protein is available for cell and gene therapy manufacturing. Contact us at customerservice@bioxcell.com for details. Species reactivity: human. Species similarity: mouse - 94%, rat - 96%, bovine - 100%, porcine - 100%.

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

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

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