# Technical Data Sheet

## Recombinant human/mouse IGF-2 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

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|---|---|
| **Catalog Number:** | **RP099** |
| **Protein Identity:** | Confirmed identity with expected mass, determined by mass spectrometry |
| **Reported Applications:** | Cellular proliferation, migration and survival<br>iPSC and primary cell differentiation to muscle<br>Osteogenic differentiation |
| **Formulation:** | Lyophilized, white powder |
| **Endotoxin:** | ≤0.9 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:** | 7.5 kDa |
| **Bioactivity Assay:** | No significant difference between EC50 of reference and test lots |
| **Mycoplasma:** | Negative |

## Description

Recombinant human/mouse IGF-2 protein (insulin-like growth factor 2) is a 67-amino-acid, 7.5 kDa single-chain polypeptide hormone of the insulin-like growth factor family, which also includes IGF-1 and insulin, with an insulin-like fold of three α-helices stabilized by three disulfide bonds between six conserved cysteine residues that are critical for its tertiary structure and biological activity. IGF-2 plays a crucial role in growth and development, particularly fetal growth, influencing organ size and body composition, and is used as a marker in prenatal diagnostics. It is implicated in colorectal, breast and prostate cancer, where it is studied as a biomarker and therapeutic target, and is investigated in metabolic disorders such as diabetes and obesity given its role in glucose metabolism. IGF-2 also has applications in tissue engineering and regenerative medicine, particularly wound healing and tissue repair, shows neuroprotective effects relevant to neurodegenerative disorders such as Alzheimer's disease, and its gene polymorphisms serve as markers for selective breeding to improve meat quality, making recombinant IGF-2 a versatile reagent for developmental biology, cancer, metabolic and regenerative 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 - 91%, rat - 94%, bovine - 95%, porcine - 98%.

## 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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