

Technical Data Sheet

Recombinant human LIF protein



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 Website Link: <https://bioxcell.com/recombinant-human-lif-protein-rp010>

Product Information

Catalog Number:	RP010
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Recommended Dilution Buffer:	InVivoPure Reconstitution Buffer A
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in 10 mM HCl (Reconstitution solution A) 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 human LIF protein (leukemia inhibitory factor) is a pleiotropic cytokine of the IL-6 superfamily, expressed as a 202-amino-acid precursor processed by removal of 22 N-terminal residues to enable receptor binding. LIF signals through the heterodimeric LIFR (gp190)/gp130 receptor and activates the JAK/STAT, PI3K and MAPK pathways, producing cell-type-dependent effects that either stimulate or inhibit proliferation and differentiation. LIF signaling is essential for maintaining murine embryonic stem cell (ESC) pluripotency via STAT3, and in neural stem cell culture it enhances self-renewal while also promoting gliogenesis depending on context and the presence of factors such as EGF and FGF-2. Human LIF can maintain mouse embryonic stem cells, but mouse LIF cannot bind the human receptor and is therefore inactive on human cells, making recombinant human LIF an important reagent for pluripotent and neural stem cell culture. 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. Human LIF maintains mouse embryonic stem cells; however mouse LIF cannot bind the human receptor. Species similarity: mouse - 78%, rat - 82%, bovine - 88%, porcine - 87%.

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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Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.

Not for resale.

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