Technical Data Sheet

Recombinant human IL-7 protein

bioxcell.com

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-il-7-protein-rp029

Product Information

Catalog Number:	**RP029**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
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:	17.5 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human IL-7 protein (interleukin-7) is a ~17.5 kDa non-glycosylated four-alpha-helix cytokine that binds the IL-7 receptor, a heterodimer of the IL-7Rα chain (CD127) and the common gamma chain (γc, CD132), activating JAK-STAT signaling and STAT5 phosphorylation to promote T-cell survival, proliferation and differentiation. IL-7 is essential for T-cell homeostasis, supporting thymocyte development and the maintenance of naive and memory T cells for effective immune surveillance, and it also contributes to B-cell and, to a lesser extent, natural killer (NK) cell development. Clinically, IL-7 is studied in cancer immunotherapy to enhance T-cell recovery after chemotherapy or radiation and alongside checkpoint inhibitors, in HIV and chronic infections to restore CD4+ T-cell counts, in bone marrow transplantation to accelerate T-cell recovery and mitigate graft-versus-host disease, in autoimmune diseases such as multiple sclerosis and rheumatoid arthritis, and as a vaccine adjuvant and regenerative-medicine tool, making recombinant IL-7 a valuable reagent for immunology and immunotherapy 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: human. Species similarity: mouse - 56%, rat - 57%, bovine - 71%, porcine - 69%.

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

Bio X Cell, LLC

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

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