

Technical Data Sheet

Recombinant human IL-4 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-4-protein-rp027>

Product Information

Catalog Number:	RP027
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:	15.1 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human IL-4 protein (interleukin 4) is a compact, globular four-alpha-helix-bundle cytokine stabilized by three disulfide bonds and a key regulator of immune responses and homeostasis. Produced primarily by mast cells, T helper 2 (Th2) cells, eosinophils and basophils, IL-4 signals through IL-4Rα in type 1 (with the common gamma chain) and type 2 (with IL-13Rα1) receptor complexes, the latter also binding IL-13. IL-4 drives hematopoiesis, antibody production, B- and T-cell proliferation, and differentiation of B cells into plasma cells, induces class II MHC and CD23 expression, promotes Th2 differentiation, and modulates macrophage polarization toward the tissue-repair M2 phenotype. Because dysregulated IL-4 signaling contributes to allergies, asthma and autoimmune disease, IL-4 and its receptor are therapeutic targets, making recombinant IL-4 a valuable reagent for immunology, allergy and macrophage-differentiation 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 - 39%, rat - 38%, bovine - 55%, porcine - 59%.

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
<https://bioxcell.com>

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

+1-866-787-3444
customerservice@bioxcell.com

**Bio X Cell, Bio X Cell logo, and all other trademarks are the property
of Bio X Cell, LLC © Bio X Cell, LLC**