

Technical Data Sheet

Recombinant human GM-CSF 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 Website Link: <https://bioxcell.com/recombinant-human-gm-csf-protein-rp022>

Product Information

Catalog Number:	RP022
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:	14.6 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human GM-CSF protein (granulocyte-macrophage colony-stimulating factor / CSF-2) is a ~14.6 kDa, 144-amino-acid secreted glycoprotein of the hematopoietic growth factor family that induces development of myeloid, erythroid and megakaryocytic lineages and supports the survival, recruitment and function of myeloid and T cells. Produced by activated T and B cells, macrophages, monocytes, mast cells, endothelial cells and fibroblasts, GM-CSF binds the GM-CSF receptor (CSF2R) on myeloid and some non-hematopoietic cells, assembling higher-order complexes that activate JAK2/STAT5, Ras/ERK, NF-κB and PI3K signaling. In cell culture, GM-CSF (often with FGF-2) differentiates iPSCs and peripheral blood monocytes into macrophages and dendritic cells, shapes macrophage polarization and metabolism, and, with IL-4, generates dendritic cells that mature with IL-1β, IL-6, TNF-α, PGE2 and IL-10, and with IL-3 drives erythrocyte and megakaryocyte differentiation. GM-CSF is implicated in asthma, rheumatoid arthritis and multiple sclerosis and is explored in vaccines, cancer therapy and IVF media, making recombinant GM-CSF a versatile reagent for immunology and hematopoiesis 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 - 53%, rat - 62%, bovine - 68%, porcine - 70%.

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

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