



## Synonym

GM-CSF,CSF2,MGC131935

## Source

Mouse GM-CSF Protein, Tag Free(GMF-M5211) is expressed from human 293 cells (HEK293). It contains AA Ala 18 - Lys 141 (Accession # [P01587](#)).

Predicted N-terminus: Ala 18

## Molecular Characterization

**GM-CSF(Ala 18 - Lys 141)**  
**P01587**

This protein carries no "tag".

The protein has a calculated MW of 14.1 kDa. The protein migrates as 17-23 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 0.1 EU per µg by the LAL method.

## Sterility

Negative

## Purity

>90% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

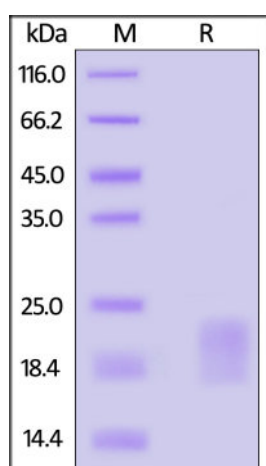
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE

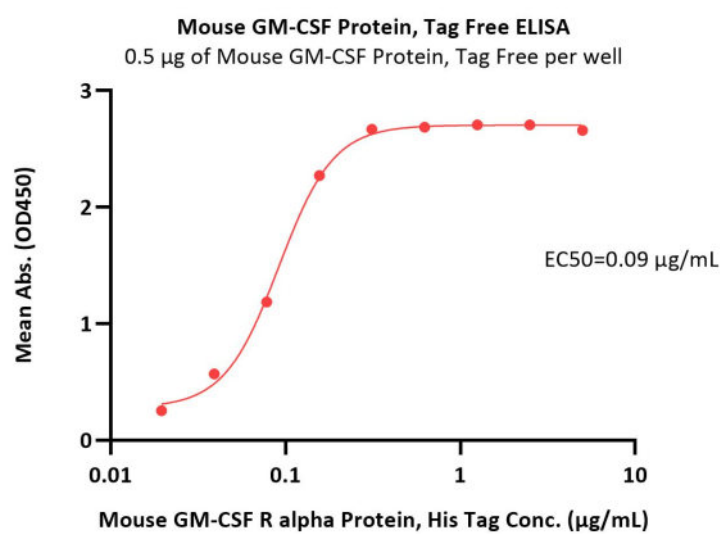


Mouse GM-CSF Protein, Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## Bioactivity-ELISA

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Immobilized Mouse GM-CSF Protein, Tag Free (Cat. No. GMF-M5211) at 5 µg/mL (100 µL/well) can bind Mouse GM-CSF R alpha Protein, His Tag (Cat. No. GMA-M52H3) with a linear range of 0.01-0.156 µg/mL (QC tested).

## Background

Granulocyte-macrophage colony-stimulating factor (GM-CSF) is also known as Colony stimulating factor 2 (granulocyte-macrophage), is a cytokine initially characterized by its ability to induce colonies of granulocytes and macrophages from myeloid progenitor cells, and is secreted by macrophages, T cells, mast cells, endothelial cells and fibroblasts. GM-CSF is a cytokine that functions as a white blood cell growth factor. GM-CSF stimulates stem cells to produce granulocytes (neutrophils, eosinophils, and basophils) and monocytes. Monocytes exit the circulation and migrate into tissue, whereupon they mature into macrophages and dendritic cells. Thus, it is part of the immune/inflammatory cascade, by which activation of a small number of macrophages can rapidly lead to an increase in their numbers, a process crucial for fighting infection. The active form of the protein is found extracellularly as a homodimer. Human GM-CSF glycosylated in its mature form. As a part of the immune/inflammatory cascade, GM-CSF promotes Th1 biased immune response, angiogenesis, allergic inflammation, and the development of autoimmunity, and thus worthy of consideration for therapeutic target. GM-CSF has also recently been evaluated in clinical trials for its potential as a vaccine adjuvant in HIV-infected patients. The preliminary results have been promising. GM-CSF is also used as a medication to stimulate the production of white blood cells following chemotherapy.

## Clinical and Translational Updates

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