

For Research Use Only

# Recombinant Human GM-CSF protein (His Tag)



Catalog Number: Eg0189

## Basic Information

**Species:**  
Human

**Purity:**  
>90 %, SDS-PAGE

**Tag:**  
His Tag

## Technical Specifications

**Purity:**

>90 %, SDS-PAGE

**Endotoxin Level:**

<0.1 EU/μg protein, LAL method

**Source:**

HEK293-derived Human GM-CSF protein Ala18-Glu144 (Accession# P04141) with a His tag at the N-terminus.

**GeneID:**

1437

**Accession:**

P04141

**Predicted Molecular Mass:**

15.3 kDa

**SDS-PAGE:**

18-25 kDa, reducing (R) conditions

**Formulation:**

Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

## Biological Activity

Not tested

## Storage and Shipping

**Storage:**

It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

**Shipping:**

The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

## Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

## Background

CSF2, also named as GM-CSF, is an important hematopoietic growth factor and immune modulator, which is produced by a variety of cell types including T cells, macrophages, endothelial cells and fibroblasts upon receiving immune stimuli. It was originally recognized as a stimulator for the proliferation of granulocytes and macrophages from bone marrow precursor cells. It has also been shown to promote the survival and activation of mature myeloid cells and therefore contributes to the maintenance of innate immune homeostasis. Recent studies suggest that GM-CSF also has proinflammatory functions and plays critical roles in the development of autoimmune and inflammatory diseases, particularly in Th17 driven diseases. GM-CSF also plays a role in embryonic development by functioning as an embryokine produced by reproductive tract.

## References

1. Burgess AW. et al. (1977). J Biol Chem. 252: 1998-2003.
2. Shi Y. et al. (2006). Cell Res. 16: 126-33.
3. Hamilton JA. et al. (2013) Trends Immunol. 3: 81-9.
4. Codarri L. et al. (2011) Nat Immunol. 12: 560-7.
5. Hamilton JA. et al. (2013) Trends Immunol. 23: 403-8.
6. Hansen PJ. et al. (2014) Anim Reprod Sci. 149: 59-6.

## Synonyms

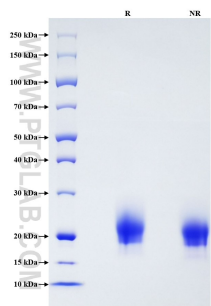
CSF2, GM-CSF, Colony stimulating factor, Colony Stimulating Factor 2, Colony-stimulating factor

For technical support and original validation data for this product please contact

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W: [ptglab.com](http://ptglab.com)

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Selected Validation Data



Purity of Recombinant Human GM-CSF was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.