

**BACKGROUND**

Granulocyte Macrophage Colony Stimulating Factor, GM-CSF, is hematopoietic factor produced by endothelial cells, monocytes, fibroblasts and T cells in response to a number of inflammatory mediators. GM-CSF is able to stimulate the production of neutrophilic granulocytes, macrophages, and mixed granulocyte-macrophage colonies from bone marrow cells. GM-CSF can also stimulate some functional activities in mature granulocytes and macrophages. Human and mouse GM-CSF show no cross-reactivity.

Recombinant rat GM-CSF is a non-glycosylated protein, containing 128 amino acids and having a molecular mass of 14.6 kDa.

**Alternative Names:**

CSF-2, Pluripoietin- $\alpha$ , MGI1GM

**Amino Acid Sequence:**

MAPTRSPNPV TRPWKHVDAI KEALSLLNDM RALENEKNEK  
VDIISNEFSI QRPTCVQTRL KLYKQGLRGN LTKLNGALTM  
IASHYQTNCP PTPETDCEIE VTFEDFIKN LKGFLFDIPF  
DCWKPVQK

**TECHNICAL INFORMATION**

**Source:** *E.coli*

**Physical Appearance:**

Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**

Recombinant rat GM-CSF is lyophilized from a sterile filtered 20 mM NaHCO<sub>3</sub> buffer.

**Stability:**

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**

The activity is determined by the dose-dependant proliferation of the mouse FDC-P1 cell line and is typically less than 0.01 ng/ml.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

