



## User Manual

### **Granulocyte- Macrophage Colony Stimulating Factor (GM-CSF) (Rat)**

**Cat. No. REOPP-07011**



**Description:**

Granulocyte- Macrophage Colony Stimulating Factor (GM-CSF) is a hematopoietic growth factor that stimulates the development of neutrophils and macrophages and promotes the proliferation and development of early erythroid megakaryocytic and eosinophilic progenitor cells. It is produced in by endothelial cells, monocytes, fibroblasts and T-lymphocytes. GM-CSF inhibits neutrophil migration and enhances the functional activity of the mature end-cells. The human and murine molecules are species-specific and exhibit no cross-species reactivity.

**Source:**

*Escherichia coli*

**Unit:**

5 µg

**Reconstitution:**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at < -20°C. Further dilutions should be made in appropriate buffered solutions.

**Formulation:**

Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4.

**Storage:**

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term

storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

### **Molecular Weight:**

Recombinant rat GM-CSF is a 14.5 kDa globular protein consisting of 127 amino acids residues.

### **Endotoxin:**

Less than 1 EU/μg of GM-CSF as determined by LAL method.

### **Usage:**

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

### **Biological Activity:**

The ED50 determined by a cell proliferation assay using murine FDC-P1 is less than 0.01 ng/mL, corresponding to a specific activity of  $> 1.0 \times 10^8$  IU/mg.

### **Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

### **AA Sequence:**

APTRSPNPV TRPWKHVDAI KEALSLLNDM RALENEKNEVDIISNEFSI QRPTCVQTRL  
KLYKQGLRGN LTKLNGALTM IASHYQTNCP PTPETDCEIE VTTFEDFIKN LKGFLFDIPF  
DCWKPVQK

**Purity:**

> 98% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

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