

## Recombinant Human Granulocyte Macrophage Colony Stimulating Factor (rh GM-CSF)

**Synonyms:** CSF-2, MGI-1GM, GM-CSF, Pluripoietin-alpha, Molgramostin, Sargramostim.

**Introduction:** GM-CSF is a cytokine that controls the production, differentiation and function of granulocytes and macrophages. The active form of the protein is found extracellularly as a homodimer. GM-CSF has been localized to a cluster of related genes at chromosome region 5q31, which is known to be associated with interstitial deletions in the 5q- syndrome and acute myelogenous leukemia. Other genes in the cluster include those encoding Interleukins 4, 5, and 13. GM-CSF stimulates the growth and differentiation of hematopoietic precursor cells from various lineages, including granulocytes, macrophages, eosinophils and erythrocytes.

**Description:** Recombinant human GM-CSF produced in *E. Coli* is a single, non-glycosylated, polypeptide chain containing 127 amino acids and having a molecular mass of 14477 Dalton. rh GM-CSF is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** lyophilized from a 0.22 µm filtered solution in 25 mM Sodiumphosphate, 200 mM NaCl, pH 7.5. The aliquots of 1 µg and 2 µg contain Trehalose 5% (w/vol) for better recovery.

**Solubility:** It is recommended to reconstitute the lyophilized rh GM-CSF in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh GM-CSF should be stored desiccated below -18° C. Upon reconstitution rh GM-CSF should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** 95.0% as determined by SDS-PAGE (silver stain).

**Amino Acid Sequence:** MAPARSPSPS TQPWEHVNAI QEARRLLNLS RDAAEMNET VEVIEMFDL QEPTCLQTRL ELYKQGLRGS LTKLKGPLTM MASHYKQHCP PTPETSCATQ IITFESFKEN KDFLLVIPF DCWEPVQE

**Biological Activity:** Tested by its ability to promote proliferation of human TF-1 cells the specific activity is 0.9 x 10<sup>7</sup> IU/mg.

**Endotoxin:** The endotoxin level is less than 1 EU / µg determined by LAL method

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<i>small</i>	2 µg	Cat.N°	11343122
<i>medium</i>	10 µg	Cat.N°	11343123
<i>large</i>	50 µg	Cat.N°	11343125
<i>x-large</i>	250 µg	Cat.N°	11343127
<i>xx-large</i>	1000 µg	Cat.N°	11343128

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