

Recombinant Rat Granulocyte Macrophage Colony Stimulating Factor (rr GM-CSF)

Synonyms: CSF-2, MGI-1GM, 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 rat GM-CSF produced in *E. Coli* is a single, non-glycosylated, polypeptide chain containing 128 amino acids and having a molecular mass of 14.59 KDa. rr 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 carrier free solution in PBS. The aliquotes of 1µg and 2 µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rr GM-CSF in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rr GM-CSF although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rr 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: Greater than 95.0% as determined by: SDS-PAGE.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Ala-Pro-Thr-Arg.

Biological Activity: The ED₅₀ as determined by the dose-dependant stimulation of the proliferation of murine FDCP-1 cell line is < 0.01 ng/ml, corresponding to a specific activity of 1 x 10⁸ IU/mg.

Endotoxicity: The endotoxin level is less than 1 EU / µg determined by LAL method.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	13343122
<i>medium</i>	10 µg	Cat.N°	13343123
<i>large</i>	50 µg	Cat.N°	13343125
<i>x-large</i>	250 µg	Cat.N°	13343127
<i>xx-large</i>	1000 µg	Cat.N°	13343128

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Gladiolenweg 2; 26169 Friesoythe; Germany
 phone:+49-(0)4491-400997, fax:+49-(0)4491-400998, info@immunotools.com
www.immunotools.com