

DATASHEET

Name		GM-CSF, REC.RAT	
Product	Granulocyte Macrophage-Colony Stimulating Factor, Rec. Rat	Article-No.	40117
Formulation	White powder - lyophilised with no additives	Storage	Freezer at -20°C Prevent freeze-thaw cycles

Introduction:

Granulocyte Macrophage-Colony Stimulating Factor 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. This gene 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 Granulocyte Macrophage-Colony Stimulating Factor produced in *Escherichia Coli* is a single, non-glycosylated, polypeptide chain containing 128 amino acids and having a molecular mass of 14590.65 Daltons. rrGM-CSF is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Purity: > 95.0% (RP-HPLC & SDS-PAGE)

Solubility:

It is recommended to reconstitute the lyophilised rrGM-CSF in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability:

Lyophilised rrGM-CSF, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rrGM-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).

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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 range = 0.001-0.01 ng/ml, determined by the dose dependent proliferation of mouse MC/9 cells.

Protein content:

Protein quantification was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.966 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated the PC GENE computer analysis program of protein sequences (telliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of GM-CSF as a reference standard.

Usage:

Our products are intended for lab research only. Not for human, animal or diagnostic use.