

RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Porcine Granulocyte Macrophage-Colony Stimulating Factor

Catalog No.

228-10554

Source:*Escherichia coli***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. 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

Granulocyte Macrophage Colony Stimulating Factor Porcine Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 127 amino acids and having a molecular mass of 14381 Dalton.

GM-CSF Porcine Recombinant is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

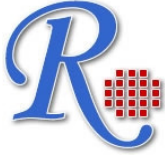
Formulation

GM-CSF Porcine was lyophilized with no additives.

Solubility

It is recommended to reconstitute the lyophilized Granulocyte Macrophage Colony Stimulating Factor in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Stability

Lyophilized Granulocyte Macrophage Colony Stimulating Factor although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GMCSF 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

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Amino acid sequence

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

Biological Activity

The ED50 range= 15-30 ng/ml, determined by the dose dependent proliferation of TF-1 cells.

Protein content

GMCSF quantitation was carried out by two independent methods

1. UV spectroscopy at 280 nm using the absorbency value of 0.977 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of GM-CSF as a Reference Standard.

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