Granulocyte Macrophage Colony Stimulating Factor, mouse recombinant (rmGM-CSF)

Catalog No: 50446
Lot No: XXXXX
Source: *E. coli*
Synonyms: CSF-2, MGI-1GM, GM-CSF, Pluripoietin-alpha, Molgramostin, Sargramostim

Background

GMCSF 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 mouse recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 125 amino acids and having a molecular mass of 14285.35 Dalton. GM-CSF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

GM-CSF mouse was lyophilized with no additives.

Solubility

It is recommended to reconstitute the lyophilized Granulocyte Macrophage Colony Stimulating Factor in sterile 20 mM AcOH (acetic Acid) not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Granulocyte Macrophage Colony Stimulating Factor, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution 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 98.0% 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 Met-Ala-Pro-Thr-Arg.

Activity

The ED50 as determined by the dose-dependant stimulation of the proliferation of murine FDC-P1 cell line is <0.2 ng/ml, corresponding to a specific activity of 5,000,000 IU/mg.

Usage

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