



Granulocyte Macrophage-Colony Stimulating Factor, Insect Cells, His Tag, human recombinant (rHuGM-CSF-Sf9-His)

Catalog No: 94969
Lot No: XXXXX
Source: Insect cells
Synonyms: CSF-2, MGI-1GM, GMCSF, 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

GM-CSF human recombinant produced in insect cells is a single, glycosylated, polypeptide chain containing 127 amino acids (18-144) and having a molecular mass of 14.6 kDa. GM-CSF is fused to a C-terminal His Tag (6x His) and purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized with PBS.

Solubility

It is recommended to reconstitute the lyophilized GMCSF in sterile 18 MΩ-cm H₂O 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 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 98.0% 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 Ala-Pro-Ala-Arg-Ser.

Activity

The ED₅₀ as determined by the dose-dependant stimulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line) is 0.1 ng/ml, corresponding to a specific activity of 10,000,000 IU/mg.

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