Granulocyte Macrophage-Colony Stimulating Factor, canine recombinant

Catalog No: 97369
Lot No: XXXXX
Source: *E. coli*
Synonyms: CSF-2, MGI-1GM, GM-CSF, Pluripoietin-alpha, Molgramostin, Sargramostim, MGC131935, MGC138897

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 canine recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 128 amino acids and having a molecular mass of 14.2 kDa. GM-CSF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

GMCSF was lyophilized after extensive dialysis against 1xPBS pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized GMCSF in sterile 18 MΩ-cm H_2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized GMCSF, 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 96.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

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APTRSPTLVT RPSQHVDAIQ EALSLLNNSN DVTAVMNKAV KVVSEVFDPE GPTCLETRLQ LYKEGLQGSL TSLKNPLTMM
ANHYKQHCPP TPESPCATQN INFKSFKENL KDFLFNIPFD CWKPVKK
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Activity

The ED50 as calculated by the dose-dependent stimulation of the proliferation of human TF1 erythroleukemic cells is typically 1 - 4 ng/ml.

Usage

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