



Macrophage Colony Stimulating Factor, human recombinant (rHuM-CSF)

Catalog No: 97239
Lot No: XXXXX
Source: Baculovirus infected silkworm
Synonyms: CSF-1, Lanimostim, MCSF, MGC31930, M-CSF, Macrophage colony-stimulating factor 1, CSF1

Background

Granulocyte/Macrophage Colony-Stimulating Factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. CSF-1 induces cells of the monocyte/macrophage lineage. It plays a role in immunological defenses, bone metabolism, lipoproteins clearance, fertility and pregnancy.

Description

Macrophage Colony Stimulating Factor human recombinant produced in *E. coli* is a disulfide linked homodimer, glycosylated, polypeptide chain containing 2 x 149 amino acids and having a total molecular mass of 42 kDa. MCSF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The lyophilized protein (1 mg/ml) was lyophilized with 20 mM phosphate buffer, 1% HSA and 3% mannitol.

Solubility

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

Stability

Lyophilized Macrophage Colony Stimulating Factor, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MCSF should be stored at 4°C between 2-7 days and for future use below -18°C. 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

EEVSEYCSHM IGSGLQSLQ RLIDSQMETS CQITFEFVDQ EQLKDPVCYL KKAFLLVQDI MEDTMRFRDN TPNAIAIVQL
QELSLRLKSC FTKDYEEHDK ACVRTFYETP LQLEKVKNV FNETKNLLDK DWNIFSKNCN NSFAECSSQ

Activity

The ED₅₀, calculated by the dose-dependant stimulation of the proliferation of murine M-NFS-60 indicator cells was found <3 ng/ml, corresponding to a specific activity of less than 333,333.33 units/mg.

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