

GM-CSF, Human

Cat. No.: Z00349-1

Size: 1.0 mg

Synonyms: rHuGM-CSF; GM-CSF

Description:

Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) was initially characterized as a growth factor that can support the *in vitro* colony formation of granulocyte-macrophage progenitors. Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) is produced by a number of different cell types, including activated T cells, B cells, macrophages, mast cells, endothelial cells, and fibroblasts, in response to cytokine of immune and inflammatory stimuli. Besides granulocyte-macrophage progenitors, Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) is a growth factor for erythroid, megakaryocyte, and eosinophil progenitors. On mature hematopoietic, monocytes/macrophages and eosinophils. Human Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) can induce human endothelial cells to migrate and proliferate. Additionally, Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) can stimulate the proliferation of a number of tumor cell lines, including osteogenic sarcoma, carcinoma, and adenocarcinoma cell lines.

Amino Acid Sequence:

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00001 MAPARSPSPS TQPWEHVNAI QEARRLLNLS RDAAEMNET
00041 VEIVSEMFDL QEPTCLQTRL ELYKQGLRGS LTKLKGPLTM
00081 MASHYKQHCP PTPETSCATQ IITFESFKEN LKDFLLVIPF
00121 DCWEPVQE
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Source: *E. coli*

Species: Human

Biological Activity: The ED50 as determined by the dose-dependant stimulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line) is less than 0.1 ng/ml, corresponding to a Specific Activity of 1.0×10^7 IU/mg.

Molecular Weight: 14,000 Da

Sequence Analysis: The sequence of the first fifteen N-terminal amino acids has been found to be (Met)-Ala-Pro-Ala-Arg-Ser-Pro-Ser-Pro-Ser-Thr-Gln-Pro-Trp-Glu-His.

Formulation: The protein was lyophilized after extensive dialysis against 20mM Phosphate buffer, pH7.0, 150mM NaCl, 5% Mannitol buffer.

Reconstitution: It is recommended that the lyophilized Recombinant Human Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) be reconstituted in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Purity: Greater than 98% as determined by

(a) Analysis by SEC-HPLC

(b) Analysis by reducing and non-reducing SDS-PAGE silver-stained gel

Endotoxin Level: Less than 0.03 ng/µg (0.3 IEU/µg) determined by LAL test

Storage: Lyophilized Recombinant Human Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF), although stable at room temperature for three weeks, should be stored desiccated at -18°C or below. Upon reconstitution, Recombinant Human Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) may be stored at 4°C for short periods (two to seven days). For long term storage, it is recommended that a carrier protein (0.1% HSA or BSA) be added. Avoid repeated freeze-thaw cycles.