Technical Data Sheet

Recombinant Human Granulocyte Macrophage Colony Stimulating Factor (rHu GM-CSF)

Human 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. It 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 or immune and inflammatory stimuli. Besides granulocyte-macrophage progenitors, GM-CSF is also a growth factor for erythroid, megakaryocyte and eosinophil progenitors. On mature hematopoietic cells, GM-CSF is a survival factor for and activates the effector functions of granulocytes, monocytes/macrophages and eosinophils. GM-CSF has also been reported to have a functional role on non-hematopoietic cells. It can induce human endothelial cells to migrate and proliferate. Additionally, GM-CSF can also stimulate the proliferation of a number of tumor cell lines, including osteogenic sarcoma, carcinoma and adenocarcinoma cell lines. GM-CSF is species specific and human GM-CSF has no biological effects on mouse cells.

Catalog Number:	RC213-14
Source:	*Escherichia coli.*
Molecular Weight:	Approximately 14.6 kDa, a single non-glycosylated polypeptide chain containing 128 amino acids.
Quantity:	5ug/20ug/1000µg
Purity:	>96% by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The ED_{50} as calculated by the dose-dependant stimulation of the proliferation of human TF-1 cells is less then 0.1 ng/ml, corresponding to a Specific Activity of 1×10^7 IU/mg.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.
AA Sequence:	MAPARSPSPS TQPWEHVNAI QEARRLLNLS RDTAAEMNET VEVISEMFDL QEPTCLQTRL ELYKQGLRGS LTKLKGPLTM MASHYKQHCP PTPETSCATQ IITFESFKEN LKDFLLVIPF DCWEPVQE
Endotoxin:	Less than 1EU/µg of rHuGM-CSF as determined by LAL method.

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Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20°C. Further dilutions should be made in appropriate buffered solutions.
Storage:	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.
Usage:	This material is offered by Bio Basic Inc for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.