



Recombinant Human Granulocyte Macrophage-Colony Stimulating Factor

rHuGM-CSF

SHANGHAI GENOMICS

Catalog number: SG3110-04

Specifications and Use

- Source** ● *Escherichia coli*.
- Molecular Mass** ● Approximately 14.5kDa
- Purity** ● $\geq 97\%$, as determined by SDS-PAGE and HPLC analysis.
- Biological Activity** ● Measured in a cell proliferation assay using the factor-dependent cell line, TF-1, the specific activity shall be not less than 1×10^7 IU/mg.
- Endotoxin Level** ● ≤ 1 EU/ μ g, determined by the LAL method.
- Formulation** ● Lyophilized from a 0.2 μ m filtered solution in 10mM Phosphate Buffer.
- Solubility** ● It is recommended to reconstitute the lyophilized rHuGM-CSF in sterile ddH₂O containing at least 0.1% human serum albumin or bovine serum albumin to prepare a stock solution of no less than 1 μ g/ml of the cytokine.
- Stability** ● Lyophilized rHuGM-CSF is stable for greater than six months from date of receipt at -20°C to -70°C.
● Upon reconstitution, this cytokine can be stored under sterile conditions at 2-8°C for one month or at -20°C to -70°C in a manual defrost freezer for three months without detectable loss of activity.
● Avoid repeated freeze-thaw cycles.
- Usage** ● FOR RESEARCH USE ONLY. NOT FOR HUMAN USE.

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 function 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.