



*Recombinant Human Granulocyte  
Macrophage-Colony Stimulating Factor*  
**rHuGM-CSF**

**Catalog number: HZ-6508**

**Lot: CHI-121407**

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*Specifications and Use*

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|----------------------------|--|
| <b>Source</b>              | <ul style="list-style-type: none"><li>● <i>Escherichia coli</i>.</li></ul>   |
| <b>Molecular Mass</b>      | <ul style="list-style-type: none"><li>● Approximately 14.5kDa</li></ul>  |
| <b>Purity</b>              | <ul style="list-style-type: none"><li>● &gt; 97%, as determined by SDS-PAGE and HPLC analysis.</li></ul>   |
| <b>Biological Activity</b> | <ul style="list-style-type: none"><li>● The specific activity is not less than <math>1 \times 10^7</math> IRU/mg, as determined by the dose-dependant stimulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line).</li></ul>  |
| <b>Endotoxin Level</b>     | <ul style="list-style-type: none"><li>● Less than 1EU/<math>\mu</math>g of rHuGM-CSF as determined by LAL method.</li></ul>  |
| <b>Formulation</b>         | <ul style="list-style-type: none"><li>● Lyophilized from a 0.2mm filtered solution in PBS containing 50mg of human serum albumin per 1mg of cytokine.</li></ul>  |
| <b>Solubility</b>          | <ul style="list-style-type: none"><li>● It is recommended to reconstitute the lyophilized rHuGM-CSF in sterile ddH<sub>2</sub>O containing at least 0.1% human serum albumin or bovine serum albumin to prepare a stock solution of no less than 1mg/ml of the cytokine.</li></ul>   |
| <b>Stability</b>           | <ul style="list-style-type: none"><li>● Lyophilized rHuGM-CSF is stable for greater than six months from date of receipt at -20 °C to -70 °C.</li><li>● 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.</li><li>● Avoid repeated freeze-thaw cycles.</li></ul> |
| <b>Usage</b>               | <ul style="list-style-type: none"><li>● FOR RESEARCH USE ONLY. NOT FOR HUMAN USE.</li></ul>  |

***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.