

## Recombinant Human GM-CSF

Catalog#:AC13078    Derived from *E.coli*

<b>DESCRIPTION</b>	<p>Recombinant Human Granulocyte-Macrophage Colony-Stimulating Factor is produced by our E.coli expression system and the target gene encoding Ala18-Glu144 is expressed.</p> <p>Accession: P04141</p> <p>Known as: Granulocyte-Macrophage Colony-Stimulating Factor; GM-CSF; Colony-Stimulating Factor; CSF; Molgramostin; Sargramostim; CSF2; GMCSF</p>												
<b>FORMULATION</b>	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.												
<b>SHIPPING</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.												
<b>STORAGE</b>	<p>Lyophilized protein should be stored at &lt; -20 °C, though stable at room temperature for 3 weeks.</p> <p>Reconstituted protein solution can be stored at 4-7 °C for 2-7 days.</p> <p>Aliquots of reconstituted samples are stable at &lt; -20 °C for 3 months.</p>												
<b>RECONSTITUTION</b>	<p>Always centrifuge tubes before opening. Do not mix by vortex or pipetting.</p> <p>It is not recommended to reconstitute to a concentration less than 100 μg/ml.</p> <p>Dissolve the lyophilized protein in distilled water.</p> <p>Please aliquot the reconstituted solution to minimize freeze-thaw cycles.</p>												
<b>QUALITY CONTROL</b>	<p>Bioactivity: Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 4-20 pg/ml.</p> <p>Mol Mass: 14.6kDa    AP Mol Mass: 14kDa, reducing conditions.</p> <p>Purity: Greater than 95% as determined by reducing SDS-PAGE.</p> <p>Endotoxin: Less than 0.1 ng/μg (1 EU/μg) as determined by LAL test.</p>												
<b>BACKGROUND</b>	<p>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 of immune and inflammatory stimuli. Besides granulocyte-macrophage progenitors, GM-CSF is also a growth factor for erythroid, megakaryocyte and eosinophil progenitors. On mature hematopoietic, monocytes/ macrophages and eosinophils. GM-CSF has 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.</p>												
<b>SDS-PAGE</b>	<table style="margin: auto;"> <thead> <tr> <th style="text-align: left;">kDa</th> <th style="text-align: center;">MK</th> <th style="text-align: center;">R</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">120</td> <td colspan="2" rowspan="8">  </td> </tr> <tr><td style="text-align: left;">90</td></tr> <tr><td style="text-align: left;">60</td></tr> <tr><td style="text-align: left;">40</td></tr> <tr><td style="text-align: left;">30</td></tr> <tr><td style="text-align: left;">20</td></tr> <tr><td style="text-align: left;">14</td></tr> </tbody> </table>	kDa	MK	R	120			90	60	40	30	20	14
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