

## GM-CSF/CSF2 Protein, Human, Recombinant (CHO)

### General Information

Synonyms:	CSF-2;Sargramostim;Molgramostin;Granulocyte Macrophage Colony Stimulating Factor;MGI-1GM;Pluripoietin-alpha;MGC138897;MGC131935;GM-CSF
Protein Construction:	Ala18-Glu144
Species:	Human
Expression Host:	CHO Cells
Accession:	P04141
Molecular Weight:	22~28 kDa (Non-reducing conditions)

### QC Testing

Biological Activity:	ED 50 < 0.2 ng/ml, measured in a cell proliferation assay using TF-1 cells, corresponding to a specific activity of > 5.0 × 10 <sup>6</sup> units/mg.
Purity:	> 95% as determined by SDS-PAGE; > 95% as determined by HPLC
Endotoxin:	< 0.2 EU/μg of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution in PBS.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

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.

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