

# Growth Factor Data Sheet

GoldBio growth factors are manufactured for **RESEARCH USE ONLY** and cannot be sold for human consumption!

Colony Stimulating Factor 2 (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. CSF2 is also a growth factor for erythroid, megakaryocyte and eosinophil progenitors. On mature hematopoietic cells, CSF2 is a survival factor for and activates the effector functions of granulocytes, monocytes/macrophages and eosinophils. It can induce human endothelial cells to migrate and proliferate and can also stimulate the proliferation of a number of tumor cell lines, including osteogenic sarcoma, carcinoma and adenocarcinoma cell lines. CSF2 is species specific and human CSF2 has no biological effects on mouse cells.

<b>Catalog Number</b>	<b>1120-03</b>
<b>Product Name</b>	<b>CSF2 (GM-CSF), Human</b> Recombinant Human Colony Stimulating Factor 2 (granulocyte-macrophage) CSF2 GM-CSF GMCSF Molgramostin MGI-1GM (Macrophage granulocyte inducer-1GM)
<b>Source</b>	<i>Escherichia coli</i>
<b>MW</b>	~14.6 kDa (128 amino acid)
<b>Sequence</b>	APARSPSPST QPWEHVNAIQ EARRLLNLSR DTAEMNETV EWISEMFDLQ EPTCLQTRLE LYKQGLRGSL TKLKGPLTMM ASHYKQHCPP TPETSCATQI ITFESFKENL KDFLLVIPFD CWEPVQE
<b>Accession Number</b>	<a href="#">P04141</a>
<b>Purity</b>	>96% by SDS-PAGE and HPLC analyses
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a assay using human TF-1 cells is less than 0.1 ng/ml, corresponding to a specific activity of >1.0 × 10 <sup>7</sup> IU/mg.
<b>Formulation</b>	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
<b>Storage/Handling</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.