

Growth Factor Data Sheet

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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. On mature hematopoietic cells, CSF2 is a survival factor for and activates the effector functions of granulocytes, monocytes/macrophages and eosinophils. CSF2 promotes a Th1 biased immune response, angiogenesis, allergic inflammation and the development of autoimmunity. It shows clinical effectiveness in ameliorating chemotherapy-induced neutropenia, and CSF2 transfected tumor cells are utilized as cancer vaccines. Mature mouse CSF2 shares 49% - 54% amino acid sequence identity with canine, feline, human, and porcine CSF2 and 69% with rat CSF2. The activity of CSF2 is species specific between human and mouse. Mouse CSF2 is only weakly active on rat cells, although rat CSF2 is fully active on mouse cells.

Catalog Number	1320-03
Product Name	CSF2 (GM-CSF), Murine Recombinant Murine Colony Stimulating Factor 2 (granulocyte-macrophage) CSF2 GM-CSF, GMCSF Molgramostin MGI-1GM (Macrophage granulocyte inducer-1GM)
Source	<i>Escherichia coli</i>
MW	~14.2 kDa (124 amino acid)
Sequence	APTRSPITVT RPWKHVEAIK EALNLLDDMP VTLNEEVEVV SNEFSFKKLT CVQTRLKIFE QGLRGNFTKL KGALNMTASY YQTYCPPTPE TDCETQVTY ADFIDSLKTF LTDIPFECKK PVQK
Accession Number	P01587
Purity	>95 % by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using murine FDC-P1 cells is less than 0.05 ng/ml, corresponding to a specific activity of >2.0 × 10 ⁷ IU/mg.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture
Storage/Handling	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.
Reconstitution	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.