

Growth Factor Data Sheet

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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. 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 rat CSF2 shares 69% with mouse CSF2. Rat CSF2 is fully active on mouse cells, although Mouse CSF2 is only weakly active on rat cells.

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| Catalog Number | 1520-03 |
| Product Name | CSF2 (GM-CSF), Rat Recombinant Rat Colony Stimulating Factor 2 (granulocyte-macrophage) CSF2 GM-CSF GMCSF Molgramostin MGI-1GM (Macrophage granulocyte inducer-1GM) |
| Source | <i>Escherichia coli</i> |
| MW | ~14.5kDa (127 amino acid) |
| Sequence | APTRSPNPVT RPWKHVDAIK EALLLNDR ALENEKNEDV DIISNEFSIQ RPTCVQTRLK LYKQGLRGNL TKLNGALMTI ASHYQTNCP TPETDCEIEV TTFEDFIKNL KGFLFDIPFD CWKPVQK |
| Accession Number | P48750 |
| Purity | >98% 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 is less than 0.01 ng/ml, corresponding to a specific activity of >1.0 × 10 ⁸ 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. |