

Growth Factor Data Sheet

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Colony Stimulating Factor 1 (CSF1), previously called Macrophage Colony Stimulating Factor (M-CSF), is a hematopoietic growth factor that is involved in the proliferation, differentiation, and survival of monocytes, macrophages, and bone marrow progenitor cells. It is produced by osteoblasts (as a result of endocrine stimulation by parathyroid hormone), exerts paracrine effects on osteoclasts and can interact with CSF1R. CSF1 is a four α -helical bundle cytokine and its active form is found extracellularly as a disulfide-linked homodimer. Four transcript variants encoding three different isoforms have been reported for CSF1 gene. Although forms may vary, all of them contain the N-terminal 150 amino acid portion that is necessary and sufficient for interaction with the receptor. The first 223 amino acid of mature human CSF1 shares 88%, 86%, 81% and 74% sequence identity with corresponding regions of dog, cow, mouse and rat CSF1, respectively. Human CSF1 is active in the mouse, but mouse CSF1 is reported to be species-specific.

Catalog Number	1120-09
Product Name	CSF1 (M-CSF), Human Recombinant Human Colony Stimulating Factor 1 (granulocyte-macrophage) Macrophage Colony Stimulating Factor; M-CSF CSF-1
Source	<i>Escherichia coli</i>
MW	~36.8 kDa (2x 158 amino acids)
Sequence	EEVSEYCSHM IGSGHLQSLQ RLIDSQMETS CQITFEFVDQ EQLKDPVCYL KKAFLLVQDI MEDTMRFRDN TPNIAIVQL QELSLRLKSC FTKDYEEHDK ACVRTFYETP LQLEKVKNV FNETKNLLDK DWNIFSKNCN NSFAECSSQG HERQSEGS
Accession Number	P09603
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 M-NFS-60 cells is less than 1 ng/ml, corresponding to a specific activity of >1.0×10 ⁶ 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.