

Growth Factor Data Sheet

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Recombinant Murine Colony Stimulating Factor 1 (Macrophage) (CSF1), formerly 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 229 amino acids of mature mouse CSF1 shares 87%, 83%, 82% and 81% sequence identity with corresponding regions of rat, dog, cow and human CSF1, respectively. Human CSF1 is active in the mouse, but mouse CSF1 is reported to be species-specific.

Catalog Number	1320-09
Product Name	CSF1 (M-CSF), Murine Recombinant Murine Colony Stimulating Factor 1 (Macrophage) Macrophage Colony Stimulating Factor, M-CSF
Source	<i>Escherichia coli</i>
MW	~52.0 kDa (a disulfide-linked homodimer consisting of two 230 amino acid polypeptide chains).
Sequence	KEVSEHCSHM IGNGHLKVLQ QLIDSQMETS CQIAFEFVDQ EQLDDPVCYL KKAFFLVQDI IDETMRFKDN TPNANATERL QELSNLNSC FTKDYEEQNK ACVRTFHETP LQLEKIKNF FNETKNLLEK DWNIFTKNCN NSFACSSRD VVTKPDCNCL YPKATPSSDP ASASPHQPPA PSMAPLAGLA WDDSQRTEGS SLLPSELPLR IEDPGSAKQR PPRSTCQTLE
Accession Number	Q3U4F9
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 2.0 ng/ml, corresponding to a specific activity of $>5.0 \times 10^9$ 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.