

## M-CSF Protein, Mouse

Cat. No.:	HY-P7085
Synonyms:	rMuM-CSF; CSF-1; MGI-IM
Species:	Mouse
Source:	E. coli
Accession:	P07141 (K33-P187)
Gene ID:	12977
Molecular Weight:	Approximately 18 kDa

### PROPERTIES

AA Sequence	<pre> K E V S E H C S H M   I G N G H L K V L Q   Q L I D S Q M E T S   C Q I A F E F V D Q E Q L D D P V C Y L   K K A F F L V Q D I   I D E T M R F K D N   T P N A N A T E R L Q E L S N N L N S C   F T K D Y E E Q N K   A C V R T F H E T P   L Q L L E K I K N F F N E T K N L L E K   D W N I F T K N C N   N S F A K C S S R D   V V T K P           </pre>
Biological Activity	The ED <sub>50</sub> is <3 ng/mL as measured by murine M-NFS-60 cells, corresponding to a specific activity of >3.3 × 10 <sup>5</sup> units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized after extensive dialysis against 50 mM Tris, 150 mM NaCl, pH 8.0.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>Macrophage Colony Stimulating Factor (M-CSF) is a pro-inflammatory cytokine, constitutively produced by several cell types, such as fibroblasts, endothelial cells, stromal cells, macrophages, smooth muscle cells and osteoblasts, binds to its receptor CSF1R, and exists in several isoforms- as a secreted glycoprotein, a cell-surface protein and a proteoglycan<sup>[1]</sup>. M-CSF is involved in the development and proliferation of cells of the monocyte/macrophage lineage and participates in the induction of osteoclasts, which are important in the destruction of bone and cartilage and in the periarticular osteoporotic changes seen in patients with rheumatoid arthritis<sup>[2]</sup>.</p>
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## REFERENCES

- [1]. Hamilton JA. Colony-stimulating factors in inflammation and autoimmunity. *Nat Rev Immunol*. 2008 Jul;8(7):533-44.
- [2]. Rioja I, et al. Potential novel biomarkers of disease activity in rheumatoid arthritis patients: CXCL13, CCL23, transforming growth factor alpha, tumor necrosis factor receptor superfamily member 9, and macrophage colony-stimulating factor. *Arthritis Rheum*. 2008 Aug;58(8):2257-67.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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