

M-CSF Protein, Human

Cat. No.:	HY-P7050
Synonyms:	rHuM-CSF; CSF-1; MGI-IM
Species:	Human
Source:	E. coli
Accession:	P09603 (E33-S190)
Gene ID:	1435
Molecular Weight:	Approximately 28 kDa

PROPERTIES

AA Sequence	<p>M E E V S E Y C S H M I G S G H L Q S L Q R L I D S Q M E T S C Q I T F E F V D</p> <p>Q E Q L K D P V C Y L K K A F L L V Q D I M E D T M R F R D N T P N A I A I V Q</p> <p>L Q E L S L R L K S C F T K D Y E E H D K A C V R T F Y E T P L Q L L E K V K N</p> <p>V F N E T K N L L D K D W N I F S K N C N N S F A E C S S Q G H E R Q S E G S</p>
Biological Activity	The ED ₅₀ is 1 - 3 ng/mL as measured by M-NFS-60 cells, corresponding to a specific activity of 3.3 × 10 ⁵ - 1 × 10 ⁶ units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against 50 mM Tris-HCl, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O or PBS or Tris-HCl, pH 8.0.
Storage & Stability	Stored at -20°C. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. 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>Recombinant Human Macrophage Colony-stimulating Factor is a hematopoietic growth factor with various glycosylation sites, affects survival and function of the tissue macrophages, and possesses antitumor activity^[1]. 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^[2]. 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</p>
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in patients with rheumatoid arthritis^[3].

REFERENCES

- [1]. Garnick MB, et al. Preclinical and clinical evaluation of recombinant human macrophage colony-stimulating factor (rhM-CSF). *Int J Cell Cloning*. 1990 Jan;8 Suppl 1:356-71.
- [2]. Hamilton JA. Colony-stimulating factors in inflammation and autoimmunity. *Nat Rev Immunol*. 2008 Jul;8(7):533-44.
- [3]. 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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