

Active Recombinant Human CSF1, His-tagged

Cat. No. CSF1-32H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CSF1 was produced in the endosperm tissue of barley grain (<i>Hordeum vulgare</i>).
Species	Human
Source	Barley Grain
Description	M-CSF (macrophage colony stimulating factor, colony stimulating factor 1, CSF-1) is a hemtopoietic growth factor produced by monocytes, granulocytes, endothelial cells, fibroblasts and activated B-cells and T-cells. M-CSF stimulates macrophage colony formation and regulates proliferation and differentiation of hematopoeitic stem cells into macrophages and regulates survival and differentiation of monocytes. It enhances antibody-dependent cell-mediated cytotoxicity, enhances marophage killing of tumor cells and microorganisms, regulates the release of cytokines and inhibits bone resorption by osteoclasts. Human M-CSF shows biological ativity on murine and rat cells and although murine M-CSF is active in rat cells it is inactive in human cells.
Form	Sterile filtered through a 0,2 µm filter. Lyophilized from PBS pH 7.2
Bio-activity	Recombinant human M-CSF was determined by its dose-dependent effect on the proliferation of M-NFS-60 cells. The ED50 value for this effect is typically < 2 ng/ml corresponding to specific activity > 5 x 10 ⁵ U/mg. Optimal concentration should be determined for specific applications and cell lines.
Molecular Mass	Recombinant human M-CSF contains 159 amino acids and a 16 a.a. Histidine-based

 Tel: 1-631-559-9269 1-516-512-3133

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tag for a total length of 175 a.a. and has a predicted molecular mass of 20.7 kDa. The recombinant protein migrates with an apparent molecular mass of 24-26 kDa in SDS-PAGE.

Endotoxin Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg).

Purity Greater than 95% by SDS-PAGE gel analysis.

Storage The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

Reconstitution Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. The solution can be further diluted into aliquots in aqueous buffers. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

GENE INFORMATION

Gene Name CSF1 colony stimulating factor 1 (macrophage) [Homo sapiens]

Official Symbol CSF1

Synonyms CSF1; colony stimulating factor 1 (macrophage); macrophage colony-stimulating factor 1; M CSF; MCSF; MGC31930; lanimostim; CSF-1;

Gene ID 1435

mRNA Refseq NM_000757

Protein Refseq NP_000748

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MIM	120420
UniProt ID	P09603
Chromosome Location	1p21-p13
Pathway	Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Cytokines and Inflammatory Response, organism-specific biosystem; Hematopoietic cell lineage, organism-specific biosystem; Hematopoietic cell lineage, conserved biosystem; Integrins in angiogenesis, organism-specific biosystem; Osteoclast differentiation, organism-specific biosystem;
Function	cytokine activity; growth factor activity; growth factor activity; macrophage colony-stimulating factor receptor binding; macrophage colony-stimulating factor receptor binding; protein homodimerization activity;

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