

Recombinant Mouse M-CSF/CSF1

Information

Accession #	P07141
Alternate Names	colony stimulating factor 1 (macrophage); CSF1; CSF-1; MCSF; M-CSF
Source	Human embryonic kidney cell, HEK293-derived Mouse M-CSF protein
Protein sequence	Lys33-Glu262
M.Wt	26 kDa(Monomer)
Appearance	Solution protein
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 3 years from date of receipt, -20 to -70°C as supplied.
Concentration	0.2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	The EC50 for this effect is 0.2-1.5pg/mL. Measured in a cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

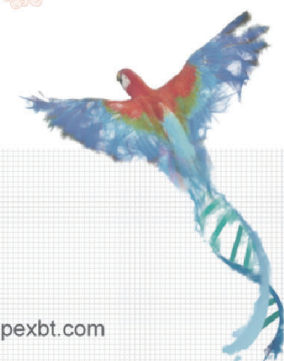
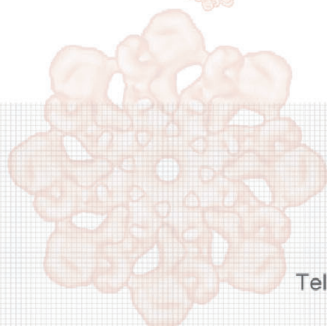
Description

Macrophage Colony Stimulating Factor(M-CSF), also known as CSF-1, is a four- α -helical-bundle cytokine that is the primary regulator of macrophage survival, proliferation and differentiation ^[1-3]. M-CSF protein is also essential for the survival and proliferation of osteoclast progenitors ^[1, 4]. M-CSF also primes and enhances macrophage killing of tumor cells and microorganisms, regulates the release of cytokines and other inflammatory modulators from macrophages, and stimulates pinocytosis ^[2, 3]. M-CSF increases during pregnancy to support implantation and growth of the decidua and placenta ^[5]. Sources of M-CSF include fibroblasts, activated macrophages, endometrial secretory epithelium, bone marrow stromal cells and activated endothelial cells ^[1-5]. The M-CSF receptor (c-fms) transduces its pleiotropic effects and mediates its endocytosis. The first 229 aa of mature mouse M-CSF shares 87%,

83%, 82% and 81% aa identity with corresponding regions of rat, dog, cow and human M-CSF, respectively [9, 10]. Human M-CSF is active in the mouse, but mouse M-CSF is reported to be species-specific.

Reference

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- [3]. Fixe, P. and V. Praloran (1997) Eur. Cytokine Netw. 8:125.
- [4]. Ryan, G.R. et al. (2001) Blood 98:74.
- [5]. Makrigiannakis, A. et al. (2006) Trends Endocrinol. Metab. 17:178.
- [6]. DeLamarter, J.F. et al. (1987) Nucleic Acids Res. 15:2389.
- [7] Ladner, M.B. et al. (1988) Proc. Natl. Acad. Sci. USA 85:6706.



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