

## M-CSF Protein, Mouse (HEK293, Tag Free)

<b>Cat. No.:</b>	HY-P73288
<b>Synonyms:</b>	Macrophage Colony-Stimulating Factor 1; CSF-1; M-CSF; Lanimostim
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	P07141 (K33-E262)
<b>Gene ID:</b>	12977
<b>Molecular Weight:</b>	Approximately 45 kDa

### PROPERTIES

<b>Biological Activity</b>	<ol style="list-style-type: none"> <li>1. Immobilized M-CSF Protein, Mouse (HEK293, Tag Free) at 2 µg/mL (100 µl/well) can bind mouse CSF1R-Fch and the EC<sub>50</sub> is 60-220 ng/mL.</li> <li>2. Measured in a cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells and the ED<sub>50</sub> is typically 3-15 ng/mL.</li> </ol>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>M-CSF Protein is a key orchestrator in regulating the survival, proliferation, and differentiation of hematopoietic precursor cells, particularly mononuclear phagocytes, including macrophages and monocytes. It actively promotes the release of pro-inflammatory chemokines, thereby playing a pivotal role in innate immunity and inflammatory processes. Additionally, M-CSF assumes a crucial role in the regulation of osteoclast proliferation and differentiation, influencing bone resorption, and contributing to normal bone development. Beyond its skeletal impact, M-CSF is indispensable for normal male and female fertility. The cytokine also facilitates the reorganization of the actin cytoskeleton, regulates the formation of membrane ruffles, cell adhesion, and cell migration. It further plays a role in lipoprotein clearance. M-CSF exists in multiple forms, including a homodimer with two identical 150-200 kDa proteoglycan subunits, a heterodimer with a 150-200 kDa proteoglycan subunit and a truncated 43 kDa subunit, and a homodimer with two identical 43 kDa subunits. The protein's diverse functions are mediated through its interaction with the receptor CSF1R.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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