

## Recombinant Rat M-CSF Protein(Sumo Tag)

**Catalog Number:** PDER100138

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

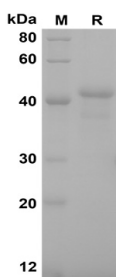
### Description

<b>Species</b>	Rat
<b>Source</b>	E.coli-derived Rat M-CSF protein Glu33-Arg254, with an N-terminal Sumo
<b>Calculated MW</b>	37.3 kDa
<b>Observed MW</b>	42 kDa
<b>Accession</b>	Q8JZQ0
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 90% as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 10 EU/mg of the protein as determined by the LAL method
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
<b>Reconstitution</b>	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

### Data



SDS-PAGE analysis of Rat M-CSF proteins, 2 µg/lane of Recombinant Rat M-CSF proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 42 KD

### Background

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Macrophage colony-stimulating factor 1, also known as CSF-1, M-CSF, Lanimostim and CSF1, is a single-pass membrane protein which is disulfide-linked as a homodimer or heterodimer. Granulocyte / macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. M-CSF/CSF-1 is known to facilitate monocyte survival, monocyte-to-macrophage conversion, and macrophage proliferation. M-CSF/CSF-1 is a secreted cytokine which influences hemopoietic stem cells to differentiate into macrophages or other related cell types. It binds to the Colony stimulating factor 1 receptor. M-CSF/CSF-1 may also be involved in development of the placenta. The active form of M-CSF/CSF-1 is found extracellularly as a disulfide-linked homodimer, and is thought to be produced by proteolytic cleavage of membrane-bound precursors. M-CSF/CSF-1 induces cells of the monocyte/macrophage lineage. It also plays a role in immunological defenses, bone metabolism, lipoproteins clearance, fertility and pregnancy. Upregulation of M-CSF/CSF-1 in the infarcted myocardium may have an active role in healing not only through its effects on cells of monocyte/macrophage lineage, but also by regulating endothelial cell chemokine expression.