

Recombinant Human M-CSF Protein

Size / Cat. No.: 50µg / TL-514-0050

Product Name

Generic Name	Recombinant Human M-CSF Protein
Synonym	Colony stimulating factor 1, CSF-1

Product Information

Protein sequence	A DNA sequence encoding the human M-CSF (P09603-1) was expressed with a polyhistidine tag at the C-terminus.
Expression Host	<i>E.coli</i>
QC Testing Purity	> 90 % as determined by SDS-PAGE
Activity	Cell proliferation assay was performed with M-NFS-60 cells with corresponding specific activity $\geq 1 \times 10^7$ IU/mg (calibrated according to the human M-CSF reference standard (NIBSC code: 89/512)).
Endotoxin	< 0.1 EU per µg of the protein as determined by the LAL method.
Molecular Mass	The predicted molecular weight is 19.7 kDa.
Stability & Storage	Lyophilized formulations can be stored at -20°C. If aliquots are required, they can be dissolved with water for injection, normal saline, culture medium or PBS, dissolved into small aliquots, and stored at -20°C for 6 months and -80°C for 12 months, with a diluted concentration of not less than 100 µg/mL. Avoid repeated freeze-thaw cycles..

Background

Macrophage colony-stimulating factor (M-CSF), also known as colony-stimulating cytokine 1 (CSF-1), is a hematopoietic growth factor with a dimeric glycoprotein structure. M-CSF can be synthesized in mesenchymal cells such as fibroblasts, osteoblasts, and endothelial cells, and can also be produced in activated macrophages, B cells, T cells, and a variety of tumor cells. Functionally, M-CSF promotes the differentiation of myeloid progenitor cells into monocytes, macrophages, dendritic cells, and osteoclasts through its receptor signaling.

References

1. Praloran V. Structure, biosynthesis and biological roles of monocyte-macrophage colony stimulating factor (CSF-1 or M-CSF). *Nouv Rev Fr Hematol* (1978). 1991;33(4):323-33. PMID: 1838150.
2. Fixe P, Praloran V. M-CSF: haematopoietic growth factor or inflammatory cytokine? *Cytokine*. 1998 Jan;10(1):32-7. doi: 10.1006/cyto.1997.0249. PMID: 9505143.
3. Motoyoshi K. Biological activities and clinical application of M-CSF. *Int J Hematol*. 1998 Feb;67(2):109-22. doi: 10.1016/s0925-5710(98)00010-3. PMID: 9631577.
4. Bourette RP, Rohrschneider LR. Early events in M-CSF receptor signaling. *Growth Factors*. 2000;17(3):155-66. doi: 10.3109/08977190009001065. PMID: 10705574.

Product Use

For research use only