

Human Macrophage Colony Stimulating Factor (M-CSF) - Purified

Alternate names:	M-CSF
Catalog No.:	PA1104
Quantity:	2 µg
Background:	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. CSF-1 induces cells of the monocyte/macrophage lineage. It plays a role in immunological defenses, bone metabolism, lipoproteins clearance, fertility and pregnancy.
Species:	Human
Source:	E. coli, E.coli
Format:	State: Lyophilized Purity: >95% Proprietary chromatographic techniques, > 95.0 % as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. Buffer System: 0.1 gr HSA and 0.6 gr Mannitol Reconstitution: Sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions
Description:	Macrophage Colony Stimulating Factor Human Recombinant produced in E.coli is a disulfide linked homodimer, non-glycosylated, polypeptide chain containing 2 x 159 amino acids. AA Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Glu-Glu-Val-Ser. Biological Activity: The ED50, calculated by the dose-dependant stimulation of the proliferation of murine M-NFS-60 indicator cells was found < 5 ng/ml, corresponding to a Specific Activity of 2 x 10e5 IU/mg. Molecular weight: 37 kDa 36.8 KD.
Storage:	Stable at room temperature for one month, should be stored desiccated below -20 °C. Upon reconstitution MCSF should be stored at 2 - 8 °C for one week and for future use below -20 °C. For long term storage it is recommended to add a carrier protein (0.1 % HSA or BSA). Avoid freeze-thaw cycles. Shelf life: one year from despatch.
General Readings:	1. Tee MM, Tesch GH, Nikolic-Paterson DJ, Brown FG. Human peritoneal mesothelial cells isolated from spent dialysate fluid maintain contaminating macrophages via production of macrophage colony stimulating factor. Nephrology (Carlton). 2007 Apr;12(2):160-5. PubMed PMID: 17371340.

2. Ławicki S, Czygier M, Gacuta-Szumarska E, Knapp P, Szmitkowski M. [The plasma levels and diagnostic utility of granulocyte colony stimulating factor (G-CSF) and macrophage - colony stimulating factor (M-CSF) in ovarian cancer patients]. *Pol Merkur Lekarski*. 2006 Nov;21(125):465-8. PubMed PMID: 17345841.
3. Kirma N, Hammes LS, Liu YG, Nair HB, Valente PT, Kumar S, et al. Elevated expression of the oncogene c-fms and its ligand, the macrophage colony-stimulating factor-1, in cervical cancer and the role of transforming growth factor-beta1 in inducing c-fms expression. *Cancer Res*. 2007 Mar 1;67(5):1918-26. PubMed PMID: 17332318.
4. Liu CH, Chen LH. Promotion of recombinant macrophage colony stimulating factor production by dimethyl sulfoxide addition in Chinese hamster ovary cells. *J Biosci Bioeng*. 2007 Jan;103(1):45-9. PubMed PMID: 17298900.
5. Serum levels of granulocyte colony-stimulating factor (G-CSF) and macrophage colony-stimulating factor (M-CSF) in pancreatic cancer patients. *Clin Chem Lab Med* 2007;45(1):30-4
6. Yang PT, Kasai H, Xiao WG, Zhao LJ, He LM, Yamashita A, et al. Increased expression of macrophage colony-stimulating factor in ankylosing spondylitis and rheumatoid arthritis. *Ann Rheum Dis*. 2006 Dec;65(12):1671-2. PubMed PMID: 17105859.

Pictures:

Precursor- Protein structure and amino acid sequence

