Overview

Synonyms	Macrophage Colony Stimulating Factor, CSF-1, Lanimostim, MCSF, MGC31930, M-CSF.
Description	**Macrophage Colony-Stimulating Factor 1 (M-CSF)**, involved especially in monocytopoiesis,[1]is a hematopoietic growth factor. In mammals, it exits three isoforms, which invariably share an N-terminal 32-aa signal peptide, a 149-residue growth factor domain, a 21-residue transmembrane region and a 37-aa cytoplasmictail[2]. The biological activity of human M-CSF is maintained within the 149-aa growth factor domain[3], and it is only active in the disulfide-linked dimeric form[4], which is bonded at Cys63. Recombinant human **Macrophage Colony-Stimulating Factor 1 (rhM-CSF)** produced in *E. coli* is a disulfide-linked homodimer containing two non-glycosylated polypeptide chains of 159 amino acids each. A fully biologically active molecule, rhM-CSF has a molecular mass of 28 kDaanalyzed by non-reducing SDS-PAGE and is obtained by proprietary refolding and chromatographic techniques.
Species	Human
Source	*E. coli*
Biological Activity	ED_{50} of 1 - 3 ng/ml, measured by cell proliferation assay of M-NFS-60, corresponding to a specific activity of 3.3 x 10^5-1 x 10^6 units/mg.
Sequence	MEEVSEYCSH MIGSGHLQSL QRLIDSQMET SCQITFEFVD QEQLKDPVCY LKKAFLLVQD IMEDTMRFRD NTPNAIAIVQ LQELSLRLKS CFTKDYEEHD KACVRTFYET PLQLLEKVKN VFNETKNLLD KDWNIFSKNC NNSFAECSSQ GHERQSEGS

Properties

Measured Molecular Weight	28 kDa, observed by non-reducing SDS-PAGE.
Purity	> 95% as analyzed by non-reducing SDS-PAGE.
Formulation	Lyophilized after extensive dialysis against 50 mM Tris-HCl, pH 8.0.
Reconstitution	Reconstituted in ddH_2O or PBS or Tris-HCl, pH 8.0 at 100 µg/ml.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant human **Macrophage Colony-Stimulating Factor 1 (rhM-CSF)** remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhM-CSF should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.

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