DATASHEET
Version 20181206

M-CSF, Human

Cat. No.: Z02914-1

Size: 1.0 mg

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 at GenScript.

Amino Acid Sequence:

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00001 MEEVSEYCSH MIGSGHLQSL QRLIDSQMET SCQITFEFVD
00041 QEQLKDPVCY LKKAFLLVQD IMEDTMRFRD NTPNAIAIVQ
00081 LQELSLRLKS CFTKDYEEHD KACVRTFYET PLQLLEKVKN
00121 VFNETKNLLD KDWNIFSKNC NNSFAECSSQ GHERQSEGS
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Source: *E. coli*

Species: Human

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.

Molecular Weight: 28 kDa, observed 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.

Purity: > 95% as analyzed by non-reducing SDS-PAGE.

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.

GenScript USA, Inc.
860 Centennial Ave. Piscataway, NJ 08854
Tel: 1-877-436-7274; 1-732-885-9188