RECOMBINANT HUMAN M-CSF

Catalog # 02643 **5 mg per vial**
Catalog # 02843 **25 mg per vial**

PRODUCT DESCRIPTION:

Macrophage-Colony stimulating factor (M-CSF or CSF-1) can be produced by a number of cells including fibroblasts, activated macrophages, secretory epithelial cells of the endometrium, bone marrow stromal cells, and LPS- or cytokine-activated endothelial cells. M-CSF not only stimulates the formation of macrophage colonies from bone marrow hematopoietic progenitor cells, but also induces proliferation of isolated macrophages, enhances macrophage antibody-dependent cell-mediated cytotoxicity, induces priming and enhancing of macrophages ability to kill tumor cells and microorganisms, regulates release of cytokines and other inflammatory modulators from macrophages, stimulates pinocytosis and osteoclast differentiation.

M-CSF is synthesized as a membrane-bound propeptide. Subsequent to proteolytic processing, M-CSF can occur either as a secreted, soluble form or as a membrane-anchored form, both of which are biologically active. Natural M-CSFs are glycosylated, disulfide-linked, homodimeric proteins with molecular weights ranging from 40-70 kDa. Several C-terminal variants of the soluble form of M-CSF have been found. The N-terminal 150 amino acid residues of the mature M-CSF, a region necessary and sufficient for interaction with the M-CSF receptor, is highly conserved (80% homology) between the human and murine proteins. Human M-CSF is active in the murine system, but murine M-CSF is species-specific. M-CSF is a glycoprotein, but the carbohydrate moiety is not necessary for biological activity.

SOURCE:

A DNA sequence encoding the N-terminus 158 amino acid residues of the extracellular domain of the mature native human M-CSF protein sequence was expressed in E. coli.

PURITY:

Greater than 97% as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is less than 0.1 ng per µg of the cytokine, as determined by the LAL method.

FORMULATION:

Lyophilized from a sterile-filtered solution of phosphate-buffered saline containing 50 µg of bovine serum albumin per 1 µg of cytokine.

RECONSTITUTION:

It is recommended that sterile phosphate-buffered saline containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of no less than 1 µg/ml of the cytokine.

STABILITY/STORAGE:

The lyophilized sample is stable for greater than six months at -20ºC to -70ºC.
Reconstituted M-CSF can be stored under sterile conditions at 2ºC to 4ºC for one month or at -20ºC to -70ºC for three months without detectable loss of activity.

Avoid repeated freezing and thawing.

ACTIVITY:

Activity was determined by cell proliferation assay in M-NFS-60 cells and the ED_{50} using this assay was typically 0.5 – 1.5 ng/ml.

THIS REAGENT IS FOR RESEARCH USE ONLY.
IT IS NOT TO BE ADMINISTERED TO HUMANS.

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