

## M-CSF

### Macrophage Colony Stimulating Factor human, recombinant, *E. coli*

Cat. No.	Amount
PR-491	10 µg

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -20°C

#### Avoid freeze / thaw cycles

#### Form

Lyophilized.

#### Solubility

It is recommended to reconstitute the lyophilized M-CSF in sterile bidest H<sub>2</sub>O not less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

#### Activity

ED<sub>50</sub>: < 5 ng/ml, corresponding to a specific activity of 2 x 10<sup>5</sup> IU/mg, calculated by the dose-dependent stimulation of the proliferation of murine M-NFS-60 indicator cells.

#### Endotoxin

Less than 0.1 ng/µg (IEU/µg) of M-CSF.

#### Molecular Weight

37 kDa

#### Purity

≥ 95% by SDS-PAGE and RP-HPLC

#### Description

Macrophage colony stimulating factor (M-CSF) is one of the glycoproteins called colony-stimulating factors (CSFs). A mononuclear phagocyte colony-stimulating factor (M-CSF) synthesized by mesenchymal cells. The compound stimulates the survival, proliferation, and differentiation of hematopoietic cells of the monocyte-macrophage series. Some clinical investigations have shown autologous production of M-CSF various human cell lines *in vitro* and by tumors *in vivo*.

Recombinant human M-CSF produced in *E. coli* is a disulfide linked homodimer, non-glycosylated, polypeptide chain containing 2 x 159 amino acids and has a total molecular mass of 36.8 kDa

Recombinant M-CSF is purified by proprietary chromatographic techniques.

#### Selected References:

- Wang *et al.* (2004) SHIP2 is recruited to the cell membrane upon macrophage colony-stimulating factor (M-CSF) stimulation and regulates M-CSF-induced signaling. *J. Immunol.* **173**:6820.
- Yang *et al.* (2004) Serum levels of matrix metalloproteinase 3 and macrophage colony-stimulating factor 1 correlate with disease activity in ankylosing spondylitis. *Arthritis Rheum.* **51**:691.
- Kawano *et al.* (2004) Synergistic effect of interleukin (IL)-1α and ceramide analogue on the production of IL-6, IL-8, and macrophage colony-stimulating factor by endometrial stromal cells. *Fertil. Steril.* **82**:1043.
- Rao *et al.* (2004) Membrane-bound macrophage colony-stimulating factor mediated auto-juxtacrine downregulates matrix metalloproteinase-9 release on J6-1 leukemic cell. *Exp. Biol. Med. (Maywood)* **229**:946.
- Skates *et al.* (2004) Preoperative sensitivity and specificity for early stage ovarian cancer when combining cancer antigen CA-125II, CA 15-3, CA 72-4, and macrophage colony-stimulating factor using mixtures of multivariate normal distributions. *J. Clin. Oncol.* **22**:4059.
- Techel *et al.* (2004) Discrimination of heterozygous from wild-type mice bearing a mutation in the macrophage-colony-stimulating factor gene using capillary electrophoresis. *Lab. Anim. (NY)* **33**:33.