

# Recombinant Human Macrophage Colony Stimulating Factor (rHuM-CSF)

## PrimeGene Technical Data Sheet

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| <b>Catalog Number:</b>          | 102-09   |
| <b>Source:</b>                  | <i>Escherichia coli</i> .  |
| <b>Molecular Weight:</b>        | Approximately 36.8 kDa, a disulfide-linked homodimer consisting of two 158 amino acid polypeptide chains.  |
| <b>Quantity:</b>                | 2µg/10µg/1000µg  |
| <b>AA Sequence:</b>             | EEVSEYCSHM IGSGHLQSLQ RLIDSQMETS CQITFEFVDQ EQLKDPVCYL KKAFLLVQDI<br>MEDTMRFRDN TPNAIAIVQL QELSLRLKSC FTKDYEEHDK ACVRTFYETP LQLEKVKNV<br>FNETKNLLDK DWNIFSKNCN NSFAECSSQG HERQSEGS   |
| <b>Purity:</b>                  | > 95 % by SDS-PAGE and HPLC analyses.  |
| <b>Biological Activity:</b>     | Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using murine M-NFS-60 cells is less than 1 ng/ml, corresponding to a specific activity of > 1.0 × 10 <sup>6</sup> IU/mg.   |
| <b>Physical Appearance:</b>     | Sterile Filtered White lyophilized (freeze-dried) powder.  |
| <b>Formulation:</b>             | Lyophilized from a 0.2 µm filtered solution in PBS, pH7.4.   |
| <b>Endotoxin:</b>               | Less than 1 EU/µg of rHuM-CSF as determined by LAL method.   |
| <b>Reconstitution:</b>          | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water to a concentration of 0.1 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.            |
| <b>Shipping:</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.  |
| <b>Stability &amp; Storage:</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul> |
| <b>Usage:</b>                   | This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>   |

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### *Human Macrophage Colony Stimulating Factor*

Macrophage Colony Stimulating Factor (M-CSF), also named CSF-1, is a hematopoietic growth factor that is involved in the proliferation, differentiation, and survival of monocytes, macrophages, and bone marrow progenitor cells. It is produced by osteoblasts (as a result of endocrine stimulation by parathyroid hormone) exerts paracrine effects on osteoclasts and can interact with CSF1R. M-CSF is a four  $\alpha$ -helical bundle cytokine and its active form is found extracellularly as a disulfide-linked homodimer. Four transcript variants encoding three different isoforms have been reported for M-CSF gene. Although forms may vary, all of them contain the N-terminal 150 a.a. portion that is necessary and sufficient for interaction with the receptor. The first 223 a.a. of mature human M-CSF shares 88 %, 86 %, 81 % and 74 % sequence identity with corresponding regions of dog, cow, mouse and rat M-CSF, respectively. Human M-CSF is active in the mouse, but mouse M-CSF is reported to be species-specific.

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