Recombinant Human Macrophage Colony Stimulating Factor (rHuM-CSF)

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	102-09
Source:	*Escherichia coli.*
Molecular Weight:	Approximately 36.8 kDa, a disulfide-linked homodimer consisting of two 158 amino acid polypeptide chains.
Quantity:	2μg/10μg/1000μg
AA Sequence:	EEVSEYCSHM IGSGHLQSLQ RLIDSQMETS CQITFEFVDQ EQLKDPVCYL KKAFLLVQDI MEDTMRFRDN TPNAIAIVQL QELSLRLKSC FTKDYEEHDK ACVRTFYETP LQLLEKVKNV FNETKNLLDK DWNIFSKNCN NSFAECSSQG HERQSEGS
Purity:	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The ED_{50} 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 > 1.0×10^6 IU/mg.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μm filtered solution in PBS, pH7.4.
Endotoxin:	Less than 1 EU/μg of rHuM-CSF as determined by LAL method.
Reconstitution:	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.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Usage:	**ChemWhat Limited in UK offers this branded product for research, development or further** evaluation purposes. **NOT FOR HUMAN USE**.

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 α-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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