Recombinant Human M-CSF (His, Flag)

Information

Gene ID	1435
Accession #	P09603
Alternate Names	CSF-1; MGI-IM
Source	HEK293
Protein sequence	APARSPSPSTQPWEHVNAIQEARRLLNLSRDTAAEMNETVEVISEMFDLQEPTCLQTRLELYKQGLRGSLT KLKGPLTMMASHYKQHCPPTPETSCATQIITFESFKENLKDFLLVIPFDCWEPVQE
Tag	C-His, C-Flag
M.Wt	The protein has a calculated MW of 36.8 KDa.
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. -2 years from date of receipt, -20 to -70 °C as supplied.
Concentration	1 mg/mL
Formulation	Supplied as a 0.2 μm filtered solution in PBS, pH7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Fully biologically active as determined by a cell proliferation assay using M--NFS--60 mouse myelogenous leukemia lymphoblast cells. The EC50 for this effect is 4 ng/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95 % by SDS-PAGE.
Endotoxin	Less than 1.0 EU/μg as determined by LAL method.

Description

Macrophage colony-stimulating factor (M-CSF), also known as CSF-1, is a tetra α-helical bundle cytokine that is a major regulator of macrophage survival, proliferation, and differentiation. M-CSF is also essential for the survival and proliferation of osteoclast progenitor cells. M-CSF also initiates and enhances macrophage killing of tumor cells and microorganisms, regulates the release of cytokines and other inflammatory modulators by macrophages, and stimulates pinocytosis. M-CSF is increased during pregnancy to support the implantation and growth of the decidua and placenta. Sources of M-CSF include fibroblasts, activated macrophages, endometrial secretory epithelium, bone marrow stromal cells, and activated endothelial cells. The M-CSF receptor (c-fms) conducts its pleiotropy and mediates its endocytosis. M-CSF mRNA of various sizes appears. The full-length human M-CSF transcript encodes a type I transmembrane (TM) protein with 522 amino acids (aa), 464 aa in the extracellular domain, 21 aa in the TM domain, and 37 aa in the cytoplasmic tail, forming a 140 kDa covalent dimer. Differential processing yields two protein cleavage secretory dimers. One is an N- and O-glycosylated 86

kDa dimer, while the other is a glycosylated and chondroitin sulfate proteoglycan (PG)-modified 200 kDa subunit. Although PG-modified M-CSF can be circulated, it may be fixed by attachment to type V collagen. The shorter transcript encodes M-CSF lacking cleavage and PG sites and yields an n-glycosylated 68 kDaTM dimer and a slow-producing 44 kDa secreted dimer. Although the forms may vary in activity and half-life, they all contain an N-terminal 150 aa moiety.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com