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Recombinant Human M-CSF/CSF1, Tag Free

南京艾璞拓生物科技有限公司

Catalog Number: HF-2003

General Information

Synonyms	Colony stimulating factor 1 (macrophage); CSF1; CSF-1; macrophage colony-stimulating factor 1; MCSF
Accession #	P09603
Source	Human embryonic kidney cell, HEK293-derived human M-CSF/CSF1 protein
	Glu33-Ser190
Predicted Moleucular weight	22.0 kDa(Monomer)
Form/Structure	Dimer in solution

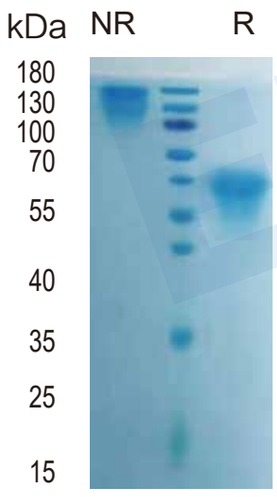
Components and Storage

Formulation	Solution protein.
	Dissolved in sterile PBS buffer.
	This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Avoid repeated freeze-thaw cycles.
	It is recommended that the protein be aliquoted for optimal storage.
	12 months from date of receipt, -20 to -70 ° C as supplied.
Shipping	Shipping with dry ice

Quality

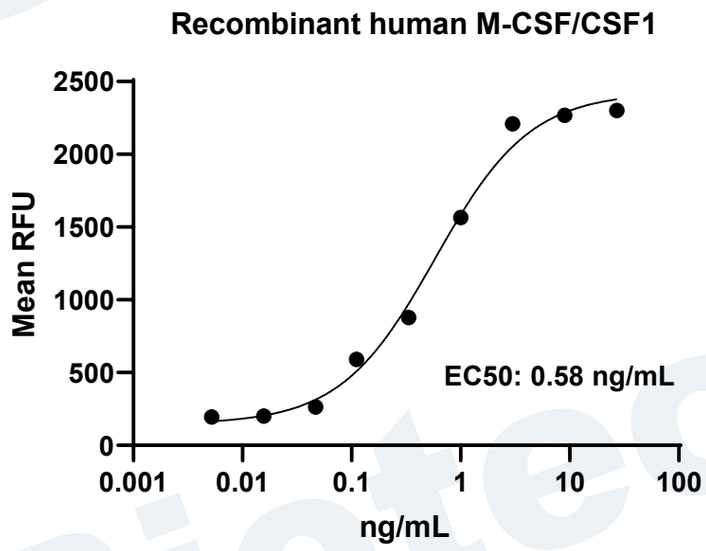
Purity	> 95%, determined by SDS-PAGE
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method
Activity	Measured in a cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells.
	The EC50 for this effect is 0.2-1.5 ng/mL.

SDS-PAGE



4 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

Bioactivity



Recombinant human M-CSF/CSF1 (Catalog # HF-2003) stimulates cell proliferation of the M-NFS-60 mouse myelogenous leukemia lymphoblast cells.

Background

Macrophage Colony Stimulating Factor(M-CSF), also known as CSF-1, is a four-alpha -helical-bundle cytokine that is the primary regulator of macrophage survival, proliferation and differentiation (1-3). M-CSF is also essential for the survival and proliferation of osteoclast progenitors (1, 4). M-CSF also primes and enhances macrophage killing of tumor cells and microorganisms, regulates the release of cytokines and other inflammatory modulators from macrophages, and stimulates pinocytosis (2, 3). M-CSF increases during pregnancy to support implantation and growth of the decidua and placenta (5). Sources of M-CSF include fibroblasts, activated macrophages, endometrial secretory epithelium, bone marrow stromal cells and activated endothelial cells (1-5). The M-CSF receptor (c-fms) transduces its pleotropic effects and mediates its endocytosis. M-CSF mRNAs of various sizes occur (3-9). Full length human M-CSF transcripts encode a 522 amino acid (aa) type I transmembrane (TM) protein with a 464 aa extracellular region, a 21 aa TM domain, and a 37 aa cytoplasmic tail that forms a 140 kDa covalent dimer. Differential processing produces two proteolytically cleaved, secreted dimers. One is an N- and O- glycosylated 86 kDa dimer, while the other is modified by both glycosylation and chondroitin-sulfate proteoglycan (PG) to generate a 200 kDa subunit. Although PG-modified M-CSF can circulate, it may be immobilized by attachment to type V collagen (8). Shorter transcripts encode M-CSF that lacks cleavage and PG sites and produces an N-glycosylated 68 kDa TM dimer and a slowly produced 44 kDa secreted dimer (7). Although forms may vary in activity and half-life, all contain the N-terminal 150 aa portion (10) .

Reference

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