Data Sheet (Cat.No.TMPS-00104)

TargetMol

M-CSF/CSF1 Protein, Rat, Recombinant (CHO)

General Information

Synonyms:	colony stimulating factor 1;MGI-IM;Macrophage Colony Stimulating Factor;Lanimostim;CSF1;MCSF;CSF-1;MGC31930
Protein Construction:	Glu33-Pro186
Species:	Rat
Expression Host:	CHO Cells
Accession:	Q8JZQ0-1
Molecular Weight:	32~40 kDa (Non-reducing conditions)

QC Testing

Biological Activity:	ED 50 < 2.5 ng/ml, measured in a cell proliferation assay using Murine M-NFS-60 cells, corresponding to a specific activity of > 4.0 × 10 5 units/mg.
Purity:	> 95% as determined by SDS-PAGE
Endotoxin:	< 0.2 EU/μg of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution in PBS.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Macrophage-Colony Stimulating Factor (M-CSF), also known as Colony Stimulating Factor-1 (CSF-1), is a hematopoietic growth factor. It can stimulate the survival, proliferation and differentiation of mononuclear phagocytes, in addition to the spreading and motility of macrophages. In mammals, it exits three isoforms, which invariably share an N-terminal 32-aa signal peptide, a 149-residue growth factor domain, a 21-residue transmembrane region and a 37-aa cytoplasmictail. M-CSF is mainly produced by monocytes, macrophages, fibroblasts, and endothelial cells. M-CSF interaction with its receptor, c-fms, has been implicated in the growth,

invasion, and metastasis of of several diseases, including breast and endometrial cancers. The biological activity of human M-CSF is maintained within the 149-aa growth factor domain, and it is only active in the disulfide-linked dimeric form, which is bonded at Cys63.

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