

Store at
-20°C

Mouse GM-CSF Recombinant Protein

Cell Signaling
TECHNOLOGY®

#70343

20 µg

New 02/21

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orders@cellsignal.comEntrez-Gene ID #12981
UniProt ID #P01587

For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Granulocyte-macrophage colony-stimulating factor (GM-CSF) is produced by activated T cells, NK cells, and macrophages (1,2). Target cells include granulocytes, monocyte precursors, and subsets of differentiated myeloid cells (1,3,4). Many target cells require GM-CSF for survival. GM-CSF induces proliferation, is involved in the hematopoietic differentiation of dendritic cells, and is a key factor in differentiation pathways leading from stem cells. GM-CSF activates effector functions of myeloid cells, thereby linking adaptive and innate immunity and in turn may boost anti-tumor immunity (5). GM-CSF receptor is composed of GM-CSFR α and the common β chain, β C, which is also utilized by IL-3 and IL-5 (1). Binding of GM-CSF initiates the Jak2, Stat5, and PI3K/Akt pathways (1).

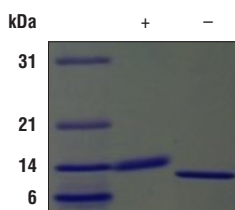
Molecular Weight: 14.3 kDa

Endotoxin: Endotoxin levels are \leq 1 EU / 1 µg mGM-CSF.

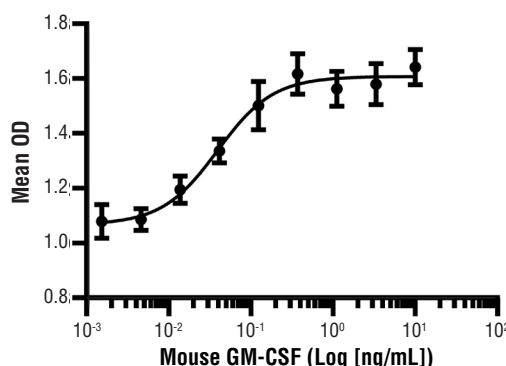
Purity: \geq 95% purity was determined by SDS-PAGE.

Source/Purification: Recombinant mouse GM-CSF was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity: The bioactivity of recombinant mGM-CSF was determined in an FDC-P1 cell proliferation assay. The ED₅₀ of each lot is \leq 0.05 ng/ml.



The purity of Mouse GM-CSF Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant mGM-CSF and staining with Coomassie Blue.



Serial dilutions of Mouse GM-CSF Recombinant Protein were added to FDC-P1 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED₅₀.

Storage: Mouse GM-CSF Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References:

- (1) Guthridge, M.A. et al. (1998) *Stem Cells* 16, 301-13.
- (2) Zhang, A.L. et al. (2007) *Blood* 110, 2484-93.
- (3) Sonoda, Y. et al. (1988) *Proc Natl Acad Sci U S A* 85, 4360-4.
- (4) Sonoda, Y. et al. (1988) *Blood* 72, 1381-6.
- (5) de la Cruz-Merino, L. et al. (2008) *Oncologist* 13, 1246-54.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.