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Mouse Granulocyte Macrophage Colony Stimulating Factor (mGM-CSF)



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
22	#P01587	12981
Background	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).	
Endotoxin	Less than 0.01 ng endotoxin/1 μ g mGM-CSF.	
Purity	>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant mGM-CSF. All lots are greater than 98% pure.	
Source / Purification	Recombinant mouse GM-CSF (mGM-CSF) Ala18-Lys141 (Accession #NP_034099) was expressed in human 293 cells at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant mGM-CSF was determined in a MC/9 cell proliferation assay. The ED ₅₀ of each lot is between 6-25 pg/ml.	
Background References	<ol style="list-style-type: none"> Guthridge, M.A. et al. (1998) <i>Stem Cells</i> 16, 301-13. Zhang, A.L. et al. (2007) <i>Blood</i> 110, 2484-93. Sonoda, Y. et al. (1988) <i>Proc Natl Acad Sci U S A</i> 85, 4360-4. Sonoda, Y. et al. (1988) <i>Blood</i> 72, 1381-6. de la Cruz-Merino, L. et al. (2008) <i>Oncologist</i> 13, 1246-54. 	

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