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#5228

Mouse Macrophage Colony Stimulating Factor (mM-CSF)



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
37-50	#P07141	12977
Background	Macrophage-colony stimulating factor (M-CSF) is produced by fibroblasts, endothelial cells, stromal cells, macrophages, osteoblasts, and other cell types (1). M-CSF is required for growth and differentiation of monocytes and macrophages (1,2). M-CSF polarizes macrophages into the M2 phenotype where anti-inflammatory IL-10 is produced, rather than the M1 phenotype where inflammatory cytokines are produced. M-CSF also recruits monocytes and enhances angiogenesis by inducing VEGF production (1,2). M-CSF binds to its receptor CSF1R; downstream signaling involves PI3K/Akt, Erk, and Stats 1, 3, and 5 (1,3). An increase in M-CSF expression may contribute to cancer progression, and high plasma M-CSF levels are associated with rheumatoid arthritis (1,4,5).	
Endotoxin	Less than 0.01 ng endotoxin/1 µg mM-CSF.	
Purity	>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant mM-CSF. All lots are greater than 98% pure.	
Source / Purification	Recombinant mouse M-CSF (mM-CSF) Lys33-Glu262 (Accession #NP_031804) was expressed in human 293 cells at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant mM-CSF was determined in an M-NFS-60 cell proliferation assay. The ED ₅₀ of each lot is between 0.5-2.0 ng/ml.	
Background References	<ol style="list-style-type: none"> 1. Hamilton, J.A. (2008) <i>Nat Rev Immunol</i> 8, 533-44. 2. Curry, J.M. et al. (2008) <i>PLoS One</i> 3, e3405. 3. Hamilton, J.A. (1997) <i>J Leukoc Biol</i> 62, 145-55. 4. Rioja, I. et al. (2008) <i>Arthritis Rheum</i> 58, 2257-67. 5. Skrzybski, M. et al. (2008) <i>Clin Cancer Res</i> 14, 4794-9. 	

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