

Mouse Tumor Necrosis Factor- α (mTNF- α)



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
16	#P06804	21926
Background	TNF- α , the prototypical member of the TNF protein superfamily, is a homotrimeric type-II membrane protein (1,2). Membrane bound TNF- α is cleaved by the metalloprotease TACE/ADAM17 to generate a soluble homotrimer (2). Both membrane and soluble forms of TNF- α are biologically active. TNF- α is produced by a variety of immune cells including T cells, B cells, NK cells and macrophages (1). Cellular response to TNF- α is mediated through interaction with receptors TNF-R1 and TNF-R2 and results in activation of pathways that favor both cell survival and apoptosis depending on the cell type and biological context. Activation of kinase pathways (including JNK, ERK (p44/42), p38 MAPK and NF- κ B) promotes the survival of cells, while TNF- α mediated activation of caspase-8 leads to programmed cell death (1,2). TNF- α plays a key regulatory role in inflammation and host defense against bacterial infection, notably <i>Mycobacterium tuberculosis</i> (3).	
Endotoxin	Less than 0.01 ng endotoxin/1 μ g mTNF- α .	
Purity	>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant mTNF- α . All lots are greater than 98% pure.	
Source / Purification	Recombinant mouse TNF- α (mTNF- α) Leu80-Leu235 (Accession #NP_038721) was expressed in human 293 cells at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant mTNF- α was determined in a L-929 cell viability assay. The ED ₅₀ of each lot is between 2-8 pg/ml.	
Background References	<ol style="list-style-type: none"> 1. Aggarwal, B.B. (2003) <i>Nat Rev Immunol</i> 3, 745-56. 2. Hehlhans, T. and Pfeffer, K. (2005) <i>Immunology</i> 115, 1-20. 3. Lin, P.L. et al. (2007) <i>J Investig Dermatol Symp Proc</i> 12, 22-5. 	

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