Active Recombinant Human TNF Protein (Val77-Leu233), GMP Grade, Animal-Free

Cat. No. TNF-11HG **Lot. No.** (See product label)

SPECIFICATION

Product Overview	GMP recombinant human TNF-alpha protein (Val77-Leu233) with and without an N-terminal Met was expressed in E. coli, produced using non-animal reagents in an Animal-Free laboratory and manufactured and tested under cGMP guidelines.
Species	Human
Source	E.coli
ProteinLength	Val77-Leu233
Description	This gene encodes a multifunctional proinflammatory cytokine that belongs to the tumor necrosis factor (TNF) superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, psoriasis, rheumatoid arthritis ankylosing spondylitis, tuberculosis, autosomal dominant polycystic kidney disease, and cancer. Mutations in this gene affect susceptibility to cerebral malaria, septic shock, and Alzheimer disease. Knockout studies in mice also suggested the neuroprotective function of this cytokine.
Bio-activity	Measured in a cytotoxicity assay using L-929 mouse fibroblast cells in the presence

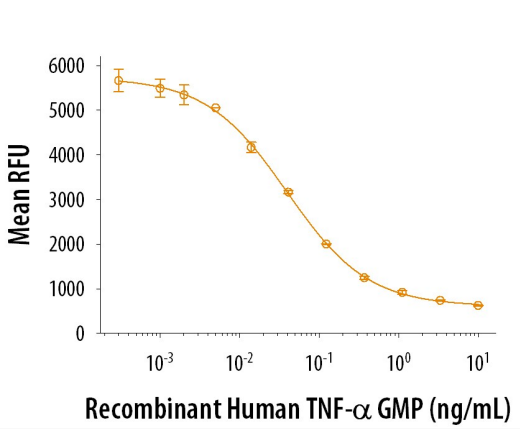
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45-1 Ramsey Road, Shirley, NY 11967, USA

	of the metabolic inhibitor actinomycin D. Matthews, The ED50 for this effect is 25-100 pg/mL. The specific activity of recombinant human TNF-alpha GMP is >4.3 x 107 IU/mg, which is calibrated against the human TNF-alpha WHO International Standard.
Molecular Mass	Predicted Molecular Mass: 17 kDa SDS-PAGE: 17 kDa, reducing conditions
N-terminal Sequence Analysis	Met-Val77-Arg-Ser-Ser-Ser-Arg-Thr-Pro-Ser Val77-Arg-Ser-Ser-Ser-Arg-Thr-Pro-Ser-Asp
Endotoxin	<0.10 EU/ μg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE with silver staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. A minimum of 6 months when stored at ≤ -20 centigrade as supplied. Refer to lot specific COA for the Use by Date. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, ≤ -20 centigrade under sterile conditions after reconstitution.
Storage Buffer	Lyophilized from a 0.2 μm filtered solution in PBS.
Reconstitution	Reconstitute at 0.1-1 mg/mL in PBS.
Shipping	The product is shipped with polar packs.

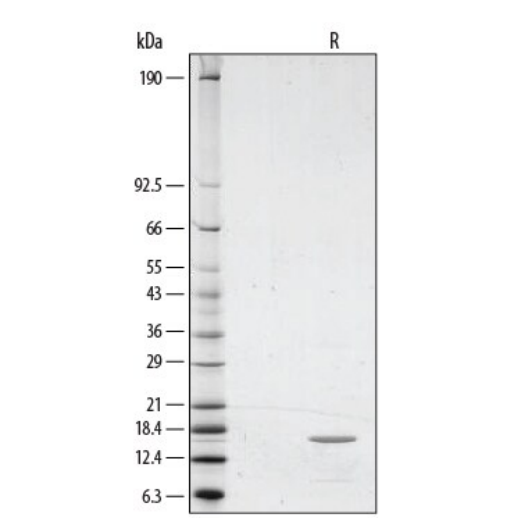
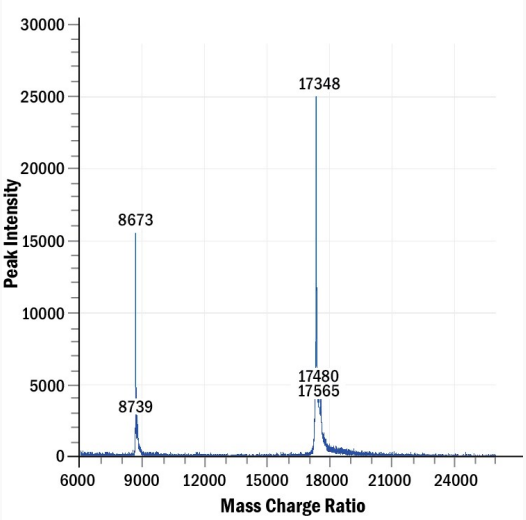
GENE INFORMATION

Gene Name	TNF tumor necrosis factor [Homo sapiens]

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Official Symbol	TNF
Synonyms	TNF; tumor necrosis factor; TNFA, tumor necrosis factor (TNF superfamily, member 2); DIF; TNF superfamily; member 2; TNF alpha; TNFSF2; TNF-a; cachectin; APC1 protein; TNF, monocyte-derived; TNF, macrophage-derived; TNF superfamily, member 2; tumor necrosis factor alpha; tumor necrosis factor-alpha; tumor necrosis factor ligand superfamily member 2; TNFA; TNF-alpha;
Gene ID	7124
mRNA Refseq	NM_000594
Protein Refseq	NP_000585
MIM	191160
UniProt ID	P01375
Bioactivity	

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SDS-PAGE	
Mass Spectrometry	

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