

Recombinant Human TNF-alpha Protein

Catalog No	RP00001	Category	Protein
Description	Recombinant Human TNF-alpha Protein is produced by <i>E. coli</i> expression system. The target protein is expressed with sequence (Val77-Leu233) of human TNF-alpha (Accession #NP_000585.2) fused with an initial Met at the N-terminus and a 6xHis tag at the C-terminus.		

Sequence Information

Species	Human	Gene ID	7124
Tags	6xHis tag at the C-terminus	Swiss Prot	P01375
Synonyms	DIF;TNF-alpha;TNFA;TNFSF2;TNLG1F		
AA Sequence	VRSSSRTPSDKPVAVHVVANPQAEGQLQWLNRRANALLANGVELRDNQLVWPSEGLYLIYS QVLFKGGQCPSTHVLLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYL GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL		

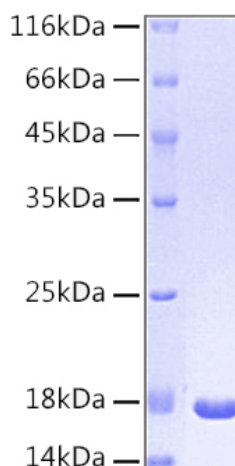
Product information

Source	<i>E. coli</i>
Purity	> 97% by SDS-PAGE.
Endotoxin	< 0.1 EU/μg of the protein by LAL method.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Reconstitution	Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water.
Storage	Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. Avoid repeated freeze/thaw cycles.

Background

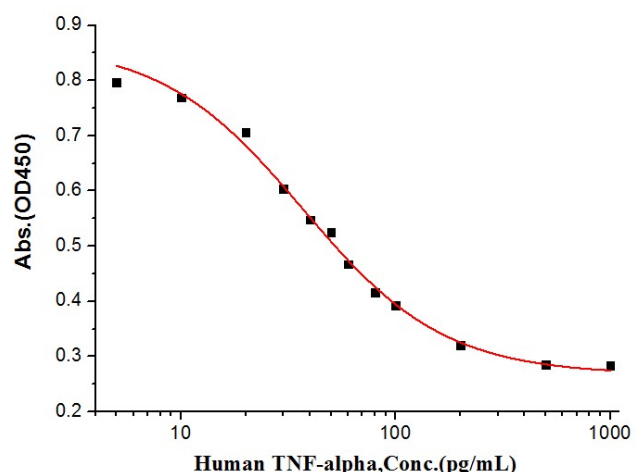
Tumor necrosis factor alpha (TNF-alpha), also known as TNF, TNFA or TNFSF2, is the prototypic cytokine of the TNF superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFR2. This cytokine is involved in the 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, and cancer. Knockout studies in mice also suggested the neuroprotective function of this cytokine.

SDS-PAGE



Recombinant Human TNF-alpha was determined by SDS-PAGE under reducing conditions with Coomassie Blue, showing a band at 17 kDa.

Bioactivity



Recombinant Human TNF-alpha induces cytotoxicity in the L-929 mouse fibroblast cell line in the presence of the metabolic inhibitor actinomycin D. The ED₅₀ for this effect is typically 25-100 pg/ml.