



Anti-Human TNF-alpha

20150304ML



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	101-M17
Size:	500 µg
Lot. No.:	According to product label

Preparation: Produced in BALB/c mice using highly pure (>98%) recombinant human TNF-alpha as the immunizing antigen. This IgG1K antibody was purified from cell culture by Protein G affinity chromatography.

Target Background

Synonyms (Target):	TNF; DIF; TNFA; TNFSF2; TNF-alpha
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Tumor necrosis factor alpha (TNF- α), also known as cachectin and TNFSF1A, is the prototypic ligand of the TNF superfamily. It is a pleiotropic molecule that plays a central role in inflammation, apoptosis, and immune system development. TNF- α is produced by a wide variety of immune and epithelial cell types. Human TNF- α consists of a 35 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 177 aa extracellular domain (ECD). Within the ECD, human TNF- α shares 97% aa sequence identity with rhesus and 71% - 92% with bovine, canine, cotton rat, equine, feline, mouse, porcine, and rat TNF- α . The 26 kDa type 2 transmembrane protein is assembled intracellularly to form a noncovalently linked homotrimer. Ligation of this complex induces reverse signaling that promotes lymphocyte costimulation but diminishes monocyte responsiveness.

Database References Target

Protein RefSeq:	NP_000585.2
Uniprot ID:	P01375
mRNA RefSeq:	NM_000594

Product Specifications

Species reactivity	Human
Cross reactivity	Human
Host	Mouse
Clonality	Monoclonal Antibody
Purification	Protein G chromatography
Immunogen	recombinant human TNF-alpha
Formulation	lyophilized
Reconstitution buffer	water

Reconstitution: Reconstitute the antibody in sterile water to a concentration of 0.1 - 1.0 mg/ml.

Stability: Lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least 2 weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Neutralization: To yield one-half maximal inhibition [ND_{50}] of the biological activity of hTNF- α (0.5 ng/ml), a concentration of 0.1 µg/ml of this antibody is required.

Sandwich ELISA: In a sandwich ELISA (assuming 100 µl/well), a concentration of 2 - 4 µg/ml of this antibody will detect at least 1000 pg/ml of recombinant human TNF- α when used in conjunction with compatible secondary reagents.

Western Blot: To detect Human TNF-alpha by Western Blot analysis this antibody can be used at a concentration of 0.5-1.0 µg/ml. When used in conjunction with compatible secondary reagents the detection limit for recombinant Human TNF-alpha is 0.5 -1.0 ng/lane, under reducing conditions and 0.25 - 0.5 ng/lane, under non-reducing conditions.

Immunohistochemistry: This antibody stained formalin-fixed, paraffin-embedded sections of human breast invasive ductal carcinoma. The recommended concentrations are 15.0-20.0 µg/ml overnight at 4°C. An HRP-labeled polymer detection system was used with DAB Chromogen. Heat induced antigen retrieval with a pH 6.0 sodium citrate buffer is recommended. Optimal concentrations may vary.

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!