



# Anti-Human TNF-alpha

20160128BR



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>102-P87</b>
Size:	100 µg
Lot. No.:	According to product label

**Preparation:** Produced from sera of rabbits pre-immunized with highly pure (>98%) recombinant human TNF alpha (human Tumor Necrosis Factor-alpha). Anti-human TNF alpha specific antibody was purified by affinity chromatography employing immobilized human TNF alpha matrix.

## Target Background

<b>Synonyms (Target):</b>	TNF; DIF; TNFA; TNFSF2; TNF-alpha
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Tumor necrosis factor alpha (TNF- $\alpha$ ), 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- $\alpha$  is produced by a wide variety of immune and epithelial cell types. Human TNF- $\alpha$  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- $\alpha$  shares 97% aa sequence identity with rhesus and 71% - 92% with bovine, canine, cotton rat, equine, feline, mouse, porcine, and rat TNF- $\alpha$ . 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

<b>Protein RefSeq:</b>	NP_000585.2
<b>Uniprot ID:</b>	P01375
<b>mRNA RefSeq:</b>	NM_000594

## Product Specifications

<b>Species reactivity</b>	Human
<b>Clone/Ab feature</b>	Rabbit IgG
<b>Cross reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal Antibody
<b>Purification</b>	Antigen-affinity purified
<b>Immunogen</b>	recombinant human TNF-alpha
<b>Formulation</b>	lyophilized from PBS
<b>Reconstitution buffer</b>	water

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

**Stability:** The lyophilized antibody is stable for at least 2 years from date of receipt at -20°C. The reconstituted antibody is stable for at least two 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<sub>50</sub>] of the biological activity of hTNF-alpha (0.5 ng/ml), a concentration of 0.08 - 0.1 µg/ml of this antibody is required.

**Sandwich-ELISA:** To detect hTNF-alpha by sandwich ELISA (using 100µl/well) a concentration of 0.5 - 2.0 µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with compatible secondary reagents, allows the detection of 2 - 4 ng/well of recombinant hTNF-alpha.

**Western Blot:** To detect human TNF-alpha by Western Blot analysis this antibody can be used at a concentration of 0.1 - 0.2 µg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant human TNF-alpha is 1.5 - 3.0 ng/lane, under either reducing or non-reducing conditions.

**Immunohistochemistry:** This antibody stained formalin-fixed, paraffin-embedded sections of human breast invasive ductal carcinoma. The recommended concentrations are 0.5-1.0 µg/ml overnight at 4°C. An HRP-labeled polymer detection system was used with a DAB chromogen. Heat induced antigen retrieval with a pH 6.0 sodium citrate buffer is recommended. Optimal concentrations and conditions may vary.

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