

**Anti-Human TNF- $\alpha$  (RABBIT) Antibody**  
**TNF alpha Antibody**  
**Catalog # ASR4912****Specification**

---

**Anti-Human TNF- $\alpha$  (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	Anti-TNF alpha antibody has been tested in WB, ELISA, IF, and IHC. Expect a band in appropriate lysates at ~25.6kDa. This antibody is also useful for neutralization of human and primate TNF $\alpha$ activity in bioassays diluted at 1:200. The antibody does not recognize human TNF beta (lymphotoxin). Specific conditions for reactivity and signal detection should be optimized by the end user.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	TNF alpha antibody used to produce this IgG fraction antibody was prepared by repeated immunizations with recombinant human TNF $\alpha$ .

**Anti-Human TNF- $\alpha$  (RABBIT) Antibody - Additional Information****Gene ID** 7124**Other Names**  
7124**Purity**

This antibody is primarily directed against mature 17,000 MW human TNF $\alpha$  and is useful in determining its presence in various assays. In general, this antibody also detects primate TNF $\alpha$  in the same formats using similar dilutions. The antibody does not recognize human TNF $\beta$  (lymphotoxin). This IgG fraction antibody will recognize the cell-bound precursor of TNF $\alpha$  as a 26,000 protein in immunoblots, particularly in denatured samples. This antibody is also useful for neutralization of human and primate TNF $\alpha$  activity in bioassays. It does not neutralize the biological activity of lymphotoxin. For neutralization, it is recommended to incubate the sample with a 1:200 dilution of the antibody for at least 4 hours before being tested. A control of similarly diluted normal rabbit IgG is recommended.

**Storage Condition**

Store anti-TNF alpha at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for

extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

#### **Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

### **Anti-Human TNF- $\alpha$ (RABBIT) Antibody - Protein Information**

**Name** TNF

**Synonyms** TNFA, TNFSF2

#### **Function**

Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation. Impairs regulatory T- cells (Treg) function in individuals with rheumatoid arthritis via FOXP3 dephosphorylation. Up-regulates the expression of protein phosphatase 1 (PP1), which dephosphorylates the key 'Ser-418' residue of FOXP3, thereby inactivating FOXP3 and rendering Treg cells functionally defective (PubMed:<a href="http://www.uniprot.org/citations/23396208" target="\_blank">23396208</a>). Key mediator of cell death in the anticancer action of BCG-stimulated neutrophils in combination with DIABLO/SMAC mimetic in the RT4v6 bladder cancer cell line (PubMed:<a href="http://www.uniprot.org/citations/16829952" target="\_blank">16829952</a>, PubMed:<a href="http://www.uniprot.org/citations/22517918" target="\_blank">22517918</a>, PubMed:<a href="http://www.uniprot.org/citations/23396208" target="\_blank">23396208</a>). Induces insulin resistance in adipocytes via inhibition of insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake. Induces GKAP42 protein degradation in adipocytes which is partially responsible for TNF-induced insulin resistance (By similarity). Plays a role in angiogenesis by inducing VEGF production synergistically with IL1B and IL6 (PubMed:<a href="http://www.uniprot.org/citations/12794819" target="\_blank">12794819</a>). Promotes osteoclastogenesis and therefore mediates bone resorption (By similarity).

#### **Cellular Location**

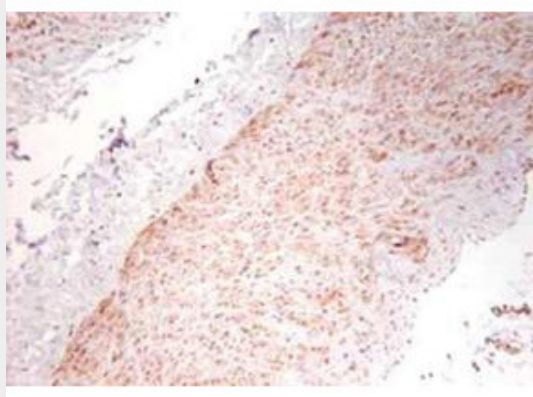
Cell membrane; Single-pass type II membrane protein [Tumor necrosis factor, soluble form]: Secreted [C-domain 2]: Secreted.

### **Anti-Human TNF- $\alpha$ (RABBIT) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Anti-Human TNF- $\alpha$ (RABBIT) Antibody - Images**



Immunohistochemistry using Rockland's polyclonal TNFa antibody showing staining of formalin/PFA-fixed paraffin-embedded sections of human artery tissue sections. Sections were fixed in formaldehyde and subjected to heat mediated antigen retrieval in citrate buffer (pH 6.0). Slides were blocked for ten minutes with 1.5% serum. Primary antibody was diluted 1:100 and incubated with samples for 24 hours at 4°C. HRP-conjugated goat anti-rabbit antibody was used as the secondary antibody.

#### **Anti-Human TNF- $\alpha$ (RABBIT) Antibody - Background**

Anti TNF alpha Antibody recognizes TNF alpha (TNF, cachexin, cachectin, tumor necrosis factor-alpha or TNF- $\alpha$ ) a cytokine involved in systemic inflammation. TNF alpha is a member of a group of cytokines that stimulate the acute phase reaction. It is produced chiefly by activated macrophages, although it can be produced by other cell types as well. The primary role of TNF alpha is in the regulation of immune cells. TNF is an endogenous pyrogen that is able to induce fever, apoptotic cell death, sepsis (through IL-1 & IL-6 production), cachexia, inflammation, and to inhibit tumorigenesis and viral replication. Dysregulation of TNF production has been implicated in a variety of human diseases, including Alzheimer's disease, cancer, major depression, and inflammatory bowel disease (IBD). Anti-TNF alpha Antibody is useful for researches interested in TNF/TNFR pathways, apoptosis signaling pathways, and cell proliferation.