**Anti-TNF alpha antibody ab6671**

**Product name**: Anti-TNF alpha antibody

**Description**: Rabbit polyclonal to TNF alpha

**Host species**: Rabbit

**Specificity**: The immunogen used to raise this antibody shares 78% homology with mouse and rat TNF alpha protein. Some customers have successfully used ab6761 with mouse and rat samples, however we do not batch test in these species and therefore we cannot guarantee this product will consistently work with mouse and rat. We would recommend ab205587 or ab1793 as an alternative product for use with these species.

The antibody does not recognize human TNF beta (lymphotoxin).

**Tested applications**: Suitable for: ELISA, IHC-P, WB, ICC/IF

**Species reactivity**: Reacts with: Human, Cynomolgus monkey

**Predicted to work with**: Mouse, Rat, Dog, Pig, Monkey, Non human primates

**Immunogen**: Recombinant full length protein corresponding to Human TNF alpha.

Database link: P01375

**Positive control**: Purchase matching WB positive control:

Recombinant Human TNF alpha protein

IHC-P: Human testis tissue, artery tissue, colon tissue and colon carcinoma tissue; Fish tissue; Cynomolgus monkey skin tissue. ICC/IF: Guinea pig lung and heart cells. WB: Recombinant TNF-alpha protein.

**General notes**: Endotoxin content by LAL is <10 pg/ml.

Abcam recommended secondaries - Goat Anti-Rabbit HRP (ab205718) and Goat Anti-Rabbit Alexa Fluor® 488 (ab150077).

See other anti-rabbit secondary antibodies that can be used with this antibody.

**Properties**

**Form**: Liquid

**Storage instructions**: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

**Storage buffer**: pH: 7.20
Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride

<table>
<thead>
<tr>
<th>Purity</th>
<th>IgG fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clonality</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG</td>
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**Applications**

Our Abpromise guarantee covers the use of ab6671 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ELISA</td>
<td>1/1000 - 1/5000.</td>
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<tr>
<td>IHC-P</td>
<td>1/100 - 1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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<tr>
<td>Neutralization</td>
<td>1/200. It is recommended to incubate the sample with the antibody for at least 4 hours before being tested. A control of similarly diluted normal rabbit IgG is recommended.</td>
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<tr>
<td>WB</td>
<td>1/500 - 1/2000. Predicted molecular weight: 25.6 kDa. Membrane Blocking is recommended with BSA not Milk for this product. Suitable for use as a positive control for Western blot against recombinant TNFalpha produced in E.Coli.</td>
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<tr>
<td>ICC/IF</td>
<td>Use at an assay dependent concentration. PubMed: 19458984</td>
<td></td>
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**Target**

**Function**

Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. 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.

**Involvement in disease**

Genetic variations in TNF are a cause of susceptibility psoriatic arthritis (PSORAS) [MIM:607507]. PSORAS is an inflammatory, seronegative arthritis associated with psoriasis. It is a heterogeneous disorder ranging from a mild, non-destructive disease to a severe, progressive, erosive arthropathy. Five types of psoriatic arthritis have been defined: asymmetrical oligoarthritis characterized by primary involvement of the small joints of the fingers or toes; asymmetrical arthritis which involves the joints of the extremities; symmetrical polyarthritis characterized by a rheumatoid-like pattern that can involve hands, wrists, ankles, and feet; arthritis mutilans, which is a rare but deforming and destructive condition; arthritis of the sacroiliac joints and spine (psoriatic spondylitis).

**Sequence similarities**

Belongs to the tumor necrosis factor family.

**Post-translational modifications**

The soluble form derives from the membrane form by proteolytic processing. The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1. O-glycosylated: glycans contain galactose, N-acetylgalactosamine and N-acetylmuramic acid.
**Cellular localization**

Secreted and Cell membrane.

**Images**

ab6671 staining TNF alpha in human testis and colon CA tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Tissue was fixed with formaldehyde and blocked with 3% H₂O₂ for 10 minutes at 25°C; antigen retrieval was by heat mediation using EDTA, pH9, 100°C, 20 mins. Samples were incubated with primary antibody (1/75) for 20 minutes at 25°C. An undiluted HRP polymer-conjugated Goat anti-mouse anti-rabbit polyclonal was used as the secondary antibody.

ab6671 staining TNF alpha in guinea pig lung and heart cells by ICC/IF (Immunocytochemistry/Immunofluorescence).

Cells were fixed with formalin and blocked with 1% BSA for 1 hour at 25°C. Samples were incubated with primary antibody (1/100 in 1% BSA in PBST) for 18 hours at 4°C. An Alexa Fluor® 555-conjugated Donkey anti-rabbit IgG (H+L) polyclonal (1/800) was used as the secondary antibody.

ab6671 staining TNF alpha in cynomolgus monkey dendritic cells/macrophages from inlamed skin tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Tissue was fixed with formaldehyde and blocked with 10% serum for 20 minutes at room temperature; antigen retrieval was by heat mediation in citrate buffer, pH6.0. Samples were incubated with primary antibody (1/100) for 30 minutes at room temperature. A biotin-conjugated Goat anti-rabbit IgG polyclonal (1/2000) was used as the secondary antibody.
Western blot - Anti-TNF alpha antibody (ab6671) at 1/1000 dilution +
Recombinant TNF alpha protein

**Secondary**
Goat Anti-Rabbit Dylight® 649 Conjugate at 1/20000 dilution

**Predicted band size:** 25.6 kDa
**Additional bands at:** 16 kDa (possible cleavage fragment)

Western Blot analysis, labeling TNF alpha with ab6671 at 1/1000.
Blocking was with 1% BSA in TBS-T incubated for 30 minutes at room temperature. The cleavage fragment is related to the soluble isoform 77 - 223.

ab6671 staining human artery tissue sections by IHC-P.
Sections were fixed in formaldehyde and subjected to heat mediated antigen retrieval in citrate buffer (pH 6.0) prior to blocking with 1.5% serum for 10 minutes. The primary antibody was diluted 1/100 and incubated with the sample for 24 hours at 4°C. An HRP-conjugated goat anti-rabbit antibody was used as the secondary.
ab6671 staining TNF alpha from human colon by immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections).

Tissue was formaldehyde fixed prior to blocking in 10% serum for 2 hours at 21°C. The primary antibody was diluted 1/100 and incubated with the sample for 2 hours at 21°C. Alexa fluor® 680 goat polyclonal, diluted 1/5000, was used as the secondary.

Immunohistochemical analysis of formalin-fixed, paraffin embedded fish tissue, staining TNF alpha with ab6671.

Tissue was fixed with Bouin's fixative; antigen retrieval was by heat mediation in a citrate buffer (pH 6). Samples were incubated with primary antibody (1/600 in diluent) for 2 hours. An HRP-conjugated goat anti-rabbit polyclonal IgG was used as the secondary antibody.

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