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Datasheet for 209-401-306

TNF alpha Antibody

Overview

Description:	Anti-Human TNF-α (RABBIT) Antibody - 209-401-306
Item No.:	209-401-306
Size:	1 mg
Applications:	IF, IHC, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Anti TNF alpha Antibody recognizes TNF alpha (TNF, cachexin, cachectin, tumor necrosis factor-alpha or TNF-α) 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.
Synonyms:	APC1 antibody, Cachectin antibody, DIF antibody, Differentiation inducing factor antibody, Macrophage cytotoxic factor antibody, MCF antibody, Necrosin antibody, Tumour Necrosis Factor Alpha antibody, rabbit anti-Tumor Necrosis Factor Alpha Antibody, rabbit anti-TNF Alpha Antibody, Tumor necrosis factor, TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Tumor necrosis factor membrane form, N-terminal fragment, NTF, Intracellular domain 1, ICD1, Intracellular domain 2, ICD2, C-domain 1, C-domain 2, Tumor necrosis factor, soluble form, TNF, TNFA, TNFSF2
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	TNF
Reactivity:	Human
Immunogen Type:	Recombinant Protein
Immunogen:	TNF alpha antibody used to produce this IgG fraction antibody was prepared by repeated immunizations with recombinant human TNFα.
Purity/Specificity:	This antibody is primarily directed against mature 17,000 MW human TNFα and is useful in determining its presence in various assays. In general, this antibody also detects primate TNFα in the same formats using similar dilutions. The antibody does not recognize human TNFß (lymphotoxin). This IgG fraction antibody will recognize the cell-bound precursor of TNFα as a 26,000 protein in immunoblots, particularly in denatured samples. This antibody is also useful for neutralization of human and primate TNFα 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.
Relevant Links:	• UniProtKB - P01375 • NCBI - P01375.1 • GeneID - 7124

Application Details

Tested Applications:	IF, IHC, WB
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 TNFα 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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:1,000 - 1:5,000
IF:	User Optimized
IHC:	1:100 - 1:500
WB:	1:500 - 1:2,000

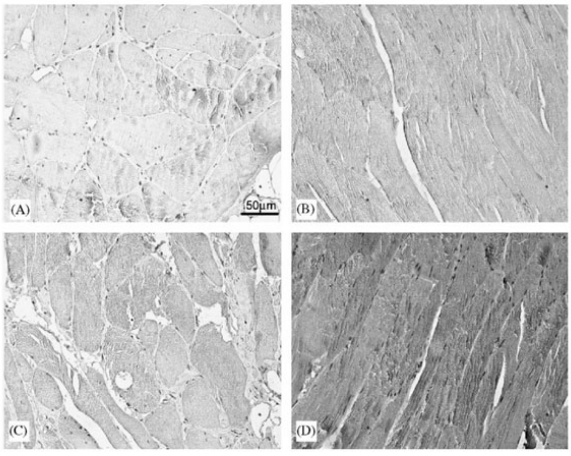
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	None
Stabilizer:	None

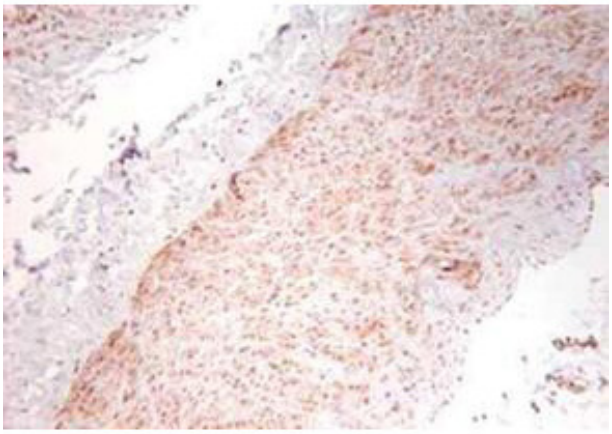
Shipping & Handling

Shipping Condition:	Dry Ice
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.
Expiration:	Expiration date is one (1) year from date of receipt.

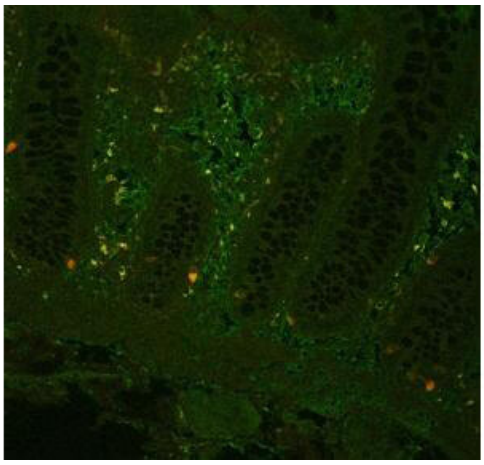
Images



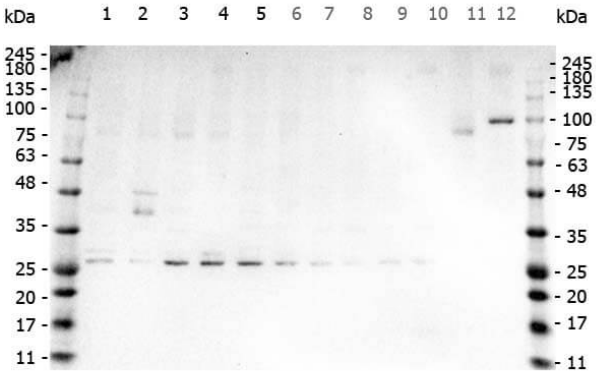
Immunohistochemistry
(I) Immunostaining for TNF-a: (A) negative control; (B) muscle from subject 465 yr (positive control); (C) muscle from weight maintainer; and (D) muscle from weight gainer. Anti-human TNF-a antibody (p/n 209-401-306) at 1:50. The sites of peroxidase binding were demonstrated with diamonobenzidine (p/n DAB-50). Fig 2. PMID: 16687193.



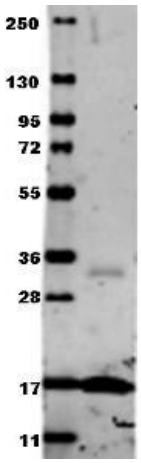
Immunohistochemistry
Immunohistochemistry using Rockland's polyclonal TNFa antibody showing staining of formalin/PFA-fixed paraffin-embedded sections of human artery tissue sections. Sections were fixed in formaldehyde and subjected to heat mediated antigen retrieval in citrate buffer (pH 6.0). Slides 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.



Immunohistochemistry
Fluorescent immunohistochemistry showing staining of human colon by Rockland's anti-TNF alpha (formalin/PFA-fixed paraffin-embedded sections). Samples were formaldehyde-fixed, then blocked in 10% serum for 2 hours at 20°C. The primary antibody was diluted 1:100 and incubated with the sample for 2 hours at 20°C. Alexa Fluor® 680 goat polyclonal secondary antibody was used diluted 1:5000.



Western Blot
Western Blot of Rabbit anti-TNF Alpha antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: HEK293 lysate (p/n W09-000-365). Lane 2: HeLa Lysate (p/n W09-000-364). Lane 3: MCF-7 Lysate (p/n W09-000-360). Lane 4: Jurkat Lysate (p/n W09-000-370). Lane 5: A431 Lysate (p/n W09-000-361). Lane 6: A549 Lysate (p/n W09-001-372). Lane 7: LNCap Lysate (p/n W09-001-GJ9). Lane 8: MOLT-4 Lysate (p/n W09-001-GK2). Lane 9: Ramos Lysate (p/n W09-000-GK4). Lane 10: Raji Lysate (p/n W09-001-368). Lane 11: A-172 Lysate (p/n W09-001-GL5). Lane 12: NIH/3T3 Lysate (p/n W10-000-358). Load: 35 µg per lane. Primary antibody: TNF Alpha antibody at 1ug/mL overnight at 4C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:30,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS (p/n MB-082) for 30 min at RT. Predicted/Observed size: 26kDa for TNF Alpha.



Western Blot
Western blot using Rockland's Anti-Human TNF-a (RABBIT) Antibody. Membrane blocked in 1% BSA-TBS-T for 30 min at RT, Rb-a-TNF alpha added at 1:1000 in 1% BSA-TBS-T o/n 4°C, DyLight 649 Gt-a-Rb (p/n 611-143-122) added at 1:20,000 in buffer (p/n MB-070) for 30 min at RT.

References

- Harada F et al. Effect of systemic administration of lipopolysaccharides derived from Porphyromonas gingivalis on gene expression in mice kidney. *Med Mol Morphol.* (2018)
- Patricia Ewert et al. Disruption of tight junction structure in salivary glands from Sjögren's syndrome patients is linked to proinflammatory cytokine exposure. *Arthritis Rheum.* (2010)
- de la Maza MP, Olivares D, Hirsch S, et al. Weight increase and overweight are associated with DNA oxidative damage in skeletal muscle. *Clin Nutr.* (2006)

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