

## Datasheet for 214-401-306S

# TNF alpha Antibody

### Overview

<b>Description:</b>	Anti-Swine TNF $\alpha$ (RABBIT) Antibody - 214-401-306S
<b>Item No.:</b>	214-401-306S
<b>Size:</b>	25 $\mu$ L
<b>Applications:</b>	WB
<b>Reactivity:</b>	Pig
<b>Host Species:</b>	Rabbit

### Product Details

**Background:** Tumor necrosis factor-alpha (TNF $\alpha$ ) in humans is a pleiotropic inflammatory cytokine. It is expressed by many different stimulated cell types including monocytes, endothelial cells, fibroblasts and both T and B-lymphocytes, but especially by macrophages. It affects most organs. The production of TNF $\alpha$  is induced by IL-1, PDGF, IFN-beta, NGF, Oncostatin M and certain fungal, viral, and parasitic invasions. Bacterial lipopolysaccharide is an especially potent stimulus.

The primary role of TNF $\alpha$  is in the regulation of immune cells. TNF $\alpha$  mediates septic shock in response to infection. It initiates a cascade of cytokines and increases vascular permeability, thereby recruiting macrophages and neutrophils. TNF $\alpha$  secreted by macrophages causes blood clotting which helps contain infection. TNF $\alpha$  is also able to induce apoptotic cell death or inflammation, and to inhibit viral replication. It possesses growth stimulating, inhibitory, and self regulatory properties. Dysregulation of TNF $\alpha$  production has been implicated in a variety of human diseases, as well as cancer.

The presence of TNF $\alpha$  is responsible for diverse immunomodulatory and toxic effects. For instance, TNF $\alpha$  induces neutrophil proliferation during inflammation, but it also induces neutrophil apoptosis upon binding to the TNF-R55 receptor. TNF $\alpha$  causes necrosis of some types of tumors, but promotes growth of other types. Low levels may aid in maintaining homeostasis by regulating the body's circadian rhythm, and may promote remodeling or replacement of injured and senescent tissue by stimulating fibroblast growth. High levels of TNF $\alpha$  correlate with increased risk of mortality.

<b>Synonyms:</b>	rabbit anti-TNF-A antibody, rabbit anti-TNF $\alpha$ antibody, rabbit anti-TNF alpha antibody, cachexin, cachectin, tumor necrosis factor-alpha, TNFSF2, TNFSF1A
<b>Host Species:</b>	Rabbit

**Clonality:** Polyclonal**Format:** IgG

## Target Details

**Gene Name:** TNF**Reactivity:** Pig**Immunogen Type:** Recombinant Protein**Immunogen:** This protein-A purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a recombinant protein raised in yeast, corresponding to 154 amino acids of mature swine TNF $\alpha$ .**Purity/Specificity:** This product was Protein-A purified from monospecific antiserum by chromatography. It is specific for swine TNF $\alpha$  protein. A BLAST analysis was used to suggest cross-reactivity with TNF $\alpha$  from swine sources based on 100% homology with the immunizing sequence. Partial reactivity is expected against TNF $\alpha$  from baboon based on 90% homology. Cross-reactivity with TNF $\alpha$  from sources other than swine has not been determined.**Relevant Links:**

- [UniProtKB - P23563](#)
- [NCBI - NP\\_999187](#)
- [GenelD - 397086](#)

## Application Details

**Tested Applications:** WB**Application Note:** This protein A purified TNF $\alpha$  antibody has been tested by western blot and is suitable for ELISA. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 16.9 kDa in size corresponding to swine TNF $\alpha$  by western blotting in the appropriate cell lysate or extract.**Assay Dilutions:** All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.**ELISA:** 1:2,000 - 1:2,500**IHC:** User Optimized**WB:** 1:1000

## Formulation

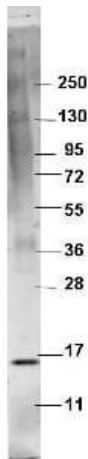
**Physical State:** Liquid (sterile filtered)

<b>Concentration:</b>	1.15 mg/mL by UV absorbance at 280 nm
<b>Buffer:</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Preservative:</b>	0.01% (w/v) Sodium Azide
<b>Stabilizer:</b>	None

## Shipping & Handling

<b>Shipping Condition:</b>	Dry Ice
<b>Storage Condition:</b>	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
<b>Expiration:</b>	Expiration date is three (3) months from date of receipt.

## Images



### Western Blot

Western blot using Rockland's protein-A purified anti-swine TNF $\alpha$  antibody shows detection of recombinant swine TNF $\alpha$  at 16.9 kDa, raised in yeast. The protein was purified and resolved by SDS-PAGE, then transferred to PVDF membrane. Membrane was blocked with 3% BSA (BSA-30, diluted 1:10), and probed with 1 µg/mL primary antibody overnight at 4°C. After washing, membrane was probed with IRDye800™ Conjugated Goat Anti-Rabbit IgG (p/n 611-132-122) for 45 min at room temperature.

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.