

## Anti-TNF alpha Antibody Picoband™

Catalog Number: PB9010

### About Tnf

TNF alpha (Tumor Necrosis Factor alpha) gene encodes a multifunctional proinflammatory cytokine that belongs to the tumor necrosis factor (TNF) superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFR2. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, and cancer. Knockout studies in mice also suggested the neuroprotective function of this cytokine.

### Overview

Product Name	Anti-TNF alpha Antibody Picoband™
Reactive Species	Rat
Description	Boster Bio Anti-TNF alpha Antibody Picoband™ catalog # PB9010. Tested in WB applications. This antibody reacts with Rat.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P16599

### Technical Details

Immunogen	E.coli-derived rat TNF alpha recombinant protein (Position: D89-L235). Rat TNF alpha shares 95% amino acid (aa) sequence identity with mouse TNF alpha.
Predicted Reactive Species	Bovine, Chicken, Horse, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Rat</p>

## Anti-TNF alpha Antibody Picoband™ (PB9010) Images

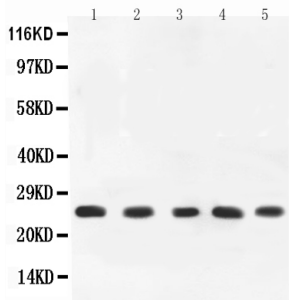


Figure 1. Western blot analysis of TNF alpha using anti-TNF alpha antibody (PB9010).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: PC-12 Whole Cell Lysate,  
Lane 2: Rat Spleen Tissue Lysate,  
Lane 3: Rat Brain Tissue Lysate,  
Lane 4: Rat Kidney Tissue Lysate,  
Lane 5: Rat Liver Tissue Lysate.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TNF alpha antigen affinity purified polyclonal antibody (Catalog # PB9010) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for TNF alpha at approximately 26KD. The expected band size for TNF alpha is at 26KD.

## 78 Publications Citing This Product

1. PubMed ID: 34225736, Li HN, Yang QQ, Wang WT, Tian X, Feng F, Zhang ST, Xia YT, Wang JX, Zou YW, Wang JY, Zeng XY. Red nucleus IL-33 facilitates the early development of mononeuropathic pain in male rats by inducing TNF-alpha through activating ERK, p38 MAPK, and JAK2/STAT3. J Neuroinflammation. 2021 Jul 5;18(1):150. doi:10.1186/s12974-021-02198-9. PMID:34225736; PMCID:PMC8258957.
2. PubMed ID: 33823825, Wang B, Gao C, Zhang P, Sun W, Zhang J, Gao J. The increased motion of lumbar induces ligamentum flavum hypertrophy in a rat model. BMC Musculoskelet Disord. 2021 Apr 6;22(1):334. doi:10.1186/s12891-021-04203-x. PMID:33823825.
3. PubMed ID: -, Yang Ping, Yingpeng Li, Shaowa Lü, Yali Sun, Wanmeng Zhang, Jialin Wu, Ting Liu, Yongji Li, A study of nanometre aggregates formation mechanism and antipyretic effect in Bai-Hu-Tang, an ancient Chinese herbal decoction, Biomedicine & Pharmacotherapy, Volume 124, 2022

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