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antibody and ELISA experts

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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/TNFBR. 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 Na2HPO4.
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.

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

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Anti-TNF alpha Antibody Picoband™ (PB9010) Images

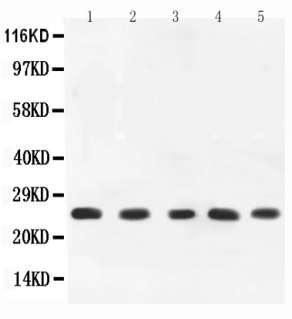

Figure 1. Western blot analysis of TNF alpha using anti-TNF alpha antibody (PB9010).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: PC-12 Whole 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 124,202

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