

Anti-IKB alpha/NFKBIA Antibody Picoband™

Catalog Number: PB9291

About NFKBIA

NFKBIA, also called IKBA or MAD-3, is one member of a family of cellular proteins that function to inhibit the NF-kappaB transcription factor. It is mapped to 14q13.2. NFKBIA inhibits NF-kappaB by masking the nuclear localization signals (NLS) of NF-kappaB proteins and keeping them sequestered in an inactive state in the cytoplasm. It moves between the cytoplasm and the nucleus via a nuclear localization signal and CRM1-mediated nuclear export. The effect of the nonpathogenic bacteria is specific to the SCF complex substrates CTNNB1 and NFKBIA. This may help to explain the beneficial effects of treatment of inflammatory bowel disease with nonpathogenic probiotic enteric organisms. In addition, NFKBIA blocks the ability of NF-kappaB transcription factors to bind to DNA, which is required for NF-kappaB's proper functioning.

Overview

Product Name	Anti-IKB alpha/NFKBIA Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-IKB alpha/NFKBIA Antibody Picoband™ catalog # PB9291. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	P25963

Technical Details

Immunogen	E.coli-derived human IKB alpha recombinant protein (Position: Q3-Q112). Human IKB alpha shares 87% and 86% amino acid (aa) sequence identity with mouse and rat IKB alpha, respectively.
Predicted Reactive Species	Bovine, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
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	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: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

Anti-IKB alpha/NFKBIA Antibody Picoband™ (PB9291) Images

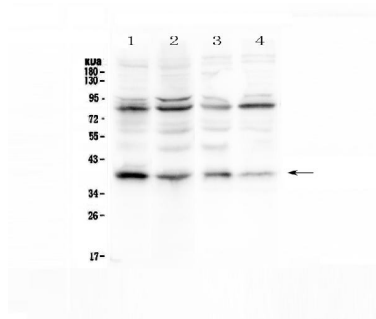


Figure 1. Western blot analysis of IKB Alpha using anti-IKB Alpha antibody (PB9291). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human Jurkat whole cell lysates,
Lane 2: human MDA-MB-453 whole cell lysates,
Lane 3: human SW620 whole cell lysates,
Lane 4: human A549 whole cell lysates.

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-IKB Alpha antigen affinity purified polyclonal antibody (Catalog # PB9291) 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 IKB Alpha at approximately 39KD. The expected band size for IKB Alpha is at 36KD.

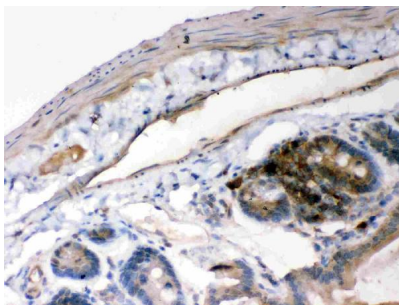


Figure 2. IHC analysis of IKB alpha using anti-IKB alpha antibody (PB9291). IKB alpha was detected in paraffin-embedded section of Mouse Intestine Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IKB alpha Antibody (PB9291) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

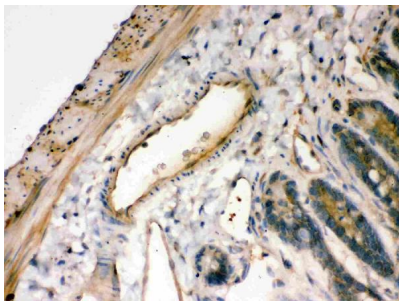
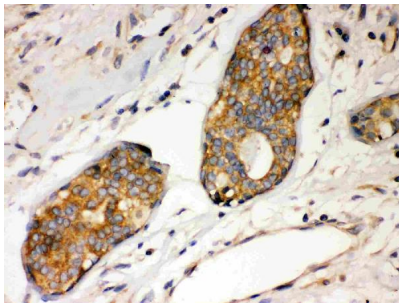


Figure 3. IHC analysis of IKB alpha using anti-IKB alpha antibody (PB9291). IKB alpha was detected in paraffin-embedded section of Rat Intestine Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IKB alpha Antibody (PB9291) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of IKB alpha using anti-IKB alpha



antibody (PB9291). IKB alpha was detected in paraffin-embedded section of Human Mammary Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IKB alpha Antibody (PB9291) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

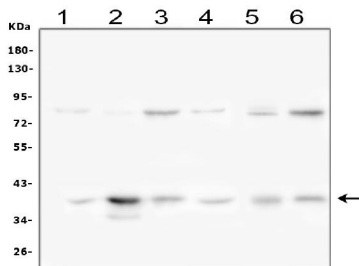


Figure 5. Western blot analysis of IKB Alpha using anti-IKB Alpha antibody (PB9291).

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: rat brain tissue lysates
- Lane 2: rat lung tissue lysates
- Lane 3: rat heart tissue lysates
- Lane 4: rat skeletal muscle tissue lysates
- Lane 5: mouse lung tissue lysates
- Lane 6: mouse heart tissue lysates

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-IKB Alpha antigen affinity purified polyclonal antibody (Catalog # PB9291) 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 IKB Alpha at approximately 39KD. The expected band size for IKB Alpha is at 36KD.

13 Publications Citing This Product

1. PubMed ID: 10.1620/tjem.222.7, Growth Hormone Releasing Peptide-2, a Ghrelin Agonist, Attenuates Lipopolysaccharide-Induced Acute Lung Injury in Rats
2. PubMed ID: 10.3109/13880209.2014.898075, Effect of ammonium pyrrolidine dithiocarbamate (PDTC) on NF-kappaB activation and CYP2E1 content of rats with immunological liver injury
3. PubMed ID: 10.1111/j.1745-7270.2006.00136.x, Regulatory Peptides Modulate Adhesion of Polymorphonuclear Leukocytes to Bronchial Epithelial Cells through Regulation of Interleukins, ICAM-1 and NF-kappaB/IkappaB

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