

Anti-NFAT1/NFATC2 Antibody Picoband®

Catalog Number: A00969

About NFATC2

NFATC2 (Nuclear factor of activated T-cells, cytoplasmic 2), also known as NFATP or the 'preexisting component' of NFAT, is present in the cytosolic fraction of unstimulated T cells, which is also a member of the nuclear factor of activated T cells (NFAT) family. The NFATC2 gene is mapped on 20q13.2. NFATC2 is highly homologous to NFATC1 over a limited domain which shows similarity to the Dorsal/Rel family but has a wider tissue distribution. Ectopic expression of NFATC2 inhibited the basal activity of the human CDK4 promoter. Additionally, both Calna^{-/-} and Nfatc2^{-/-} mice had elevated protein levels of Cdk4, confirming a negative regulatory role for the calcineurin/NFAT pathway. NFATC2 controls myoblast fusion at a specific stage of myogenesis after the initial formation of a myotube and is necessary for further cell growth. Overexpression of NFATC2 promoted differentiation of osteoclast precursor cells into tartrate-resistant acid phosphatase-positive (TRAP-positive) multinucleated osteoclast-like cells even in the absence of RANKL.

Overview

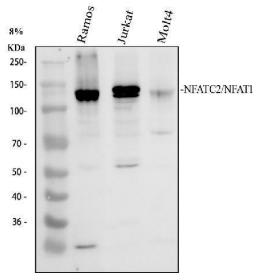
Product Name	Anti-NFAT1/NFATC2 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-NFAT1/NFATC2 Antibody Picoband® catalog # A00969. Tested in ELISA, Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
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	Q13469

Technical Details

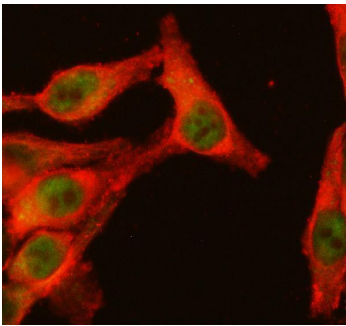
Immunogen	E. coli-derived human NFAT1 recombinant protein (Position: Q594-H676).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry(Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5ug/ml, -

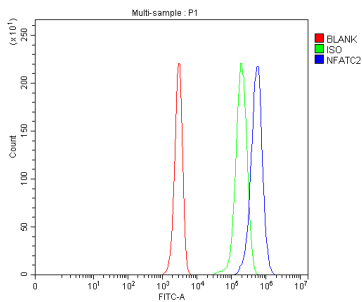
Anti-NFAT1/NFATC2 Antibody Picoband® (A00969) Images



Western blot analysis of NFAT1/NFATC2 using anti-NFAT1/NFATC2 antibody (A00969). Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Ramos whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human MOLT-4 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-NFAT1/NFATC2 antigen affinity purified polyclonal antibody (A00969) at 0.25 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for NFAT1/NFATC2 at approximately 135 kDa. The expected band size for NFAT1/NFATC2 is at 100 kDa.



IF analysis of NFAT1/NFATC2 using anti-NFAT1/NFATC2 antibody (A06945-1) and anti-Tubulin Alpha antibody (M03989-3). NFAT1/NFATC2 was detected in immunocytochemical section of Hela cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-NFAT1/NFATC2 Antibody (A06945-1) and mouse anti-Tubulin Alpha antibody (M03989-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of Jurkat cells using anti-NFAT1/NFATC2 antibody (A00969). Overlay histogram showing Jurkat cells stained with A00969 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NFAT1/NFATC2 Antibody (A00969, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

1. PubMed ID: 28560440, Bai, Y., Li, Z.X., Wang, H.L., Lian, G.C., & Wang, Y. (2017). The protective effects of PCPA against monocrotaline-induced pulmonary arterial hypertension are mediated through the downregulation of NFAT-1 and NF-kappaB. International Journal of Molec...

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