

Anti-NFAT1 Picoband Antibody

Catalog # ABO12907

Product Information

Application	WB, E
Primary Accession	NFATC2: Q13469
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for NFAT1 detection. Tested with WB, Direct ELISA in Human;Mouse;Rat.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Application Details	Western blot, 0.1-0.5 µg/ml Direct ELISA, 0.1-0.5 µg/ml
Subcellular Localization	Cytoplasm. Nucleus. Cytoplasmic for the phosphorylated form and nuclear after activation that is controlled by calcineurin-mediated dephosphorylation. Rapid nuclear exit of NFATC is thought to be one mechanism by which cells distinguish between sustained and transient calcium signals. The subcellular localization of NFATC plays a key role in the regulation of gene transcription.
Tissue Specificity	Expressed in thymus, spleen, heart, testis, brain, placenta, muscle and pancreas. Isoform 1 is highly expressed in the small intestine, heart, testis, prostate, thymus, placenta and thyroid. Isoform 3 is highly expressed in stomach, uterus, placenta, trachea and thyroid.
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E. coli-derived human NFAT1 recombinant protein (Position: Q594-H676).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Protein Information

Background

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.

Images

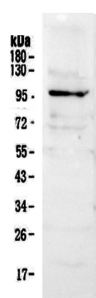


Figure 1. Western blot analysis of NFAT1 using anti-NFAT1 antibody (ABO12907). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human K562 whole 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-NFAT1 antigen affinity purified polyclonal antibody (Catalog # ABO12907) 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 with Tanon 5200 system. A specific band was detected for NFAT1 at approximately 100KD. The expected band size for NFAT1 is at 100KD.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.