

Rabbit NFATC1 Polyclonal Antibody | anti-NFATC1 antibody

NFATC1 Antibody

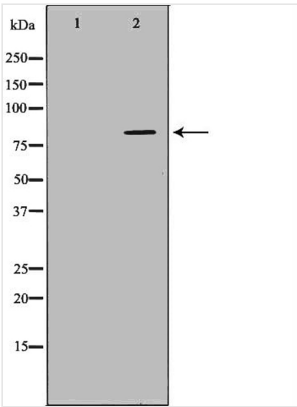
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326215	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

NFATC1; Polyclonal Antibody; NFATC1 Antibody; cytoplasmic 1; MGC138448; NF ATc; NF ATc1; NF-ATc; NF-ATc1; NF-ATc1.2; NFAC1_HUMAN; NFAT 2; NFAT transcription complex cytosolic component; NFATC 1; NFATc; NFATc1; Nuclear factor of activated T cells cytoplasmic 1; Nuclear factor of activated T cells cytoplasmic calcineurin dependent 1; Nuclear factor of activated T cells cytosolic component 1; nuclear factor of activated T-cells 'c'; Nuclear factor of activated T-cells; anti-NFATC1 antibody

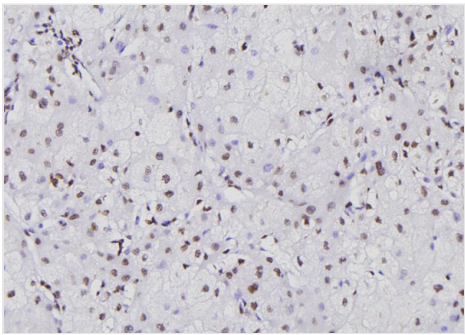
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	NFATC1 antibody detects endogenous levels of total NFATC1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	943
Applicable Applications for anti-NFATC1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human NFATC1
Subcellular Location	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, peripheral leukocytes as T-cells and spleen. Isoforms A are preferentially expressed in effector T-cells (thymus and peripheral leukocytes) whereas isoforms B and isoforms C are preferentially expressed in naive T-cells (spleen). Isoforms B are expressed in naive T-cells after first antigen exposure and isoforms A are expressed in effector T-cells after second antigen exposure. Isoforms IA are widely expressed but not detected in liver nor pancreas, neural expression is strongest in corpus callosum. Isoforms IB are expressed mostly in muscle, cerebellum, placenta and thymus, neural expression in fetal and adult brain, strongest in corpus callosum.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis of Jurkat whole cell lysate, using NFATC1 Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326215 at 1/100 staining Human liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-NFATC1 antibody

Description: The NFAT (nuclear factor of activated T cells) family of proteins consists of NFAT1 (NFATc2 or NFATp), NFAT2 (NFATc1 or NFATc), NFAT3 (NFATc4), and NFAT4 (NFATc3 or NFATx). All members of this family are transcription factors with a Rel homology domain and regulate gene transcription in concert with AP-1 (Jun/Fos) to orchestrate an effective immune response (1, 2). NFAT proteins are predominantly expressed in cells of the immune system, but are also expressed in skeletal muscle, keratinocytes, and adipocytes, regulating cell differentiation programs in these cells (3). In resting cells, NFAT proteins are heavily phosphorylated and localized in the cytoplasm. Increased intracellular calcium concentrations activate the calcium/calmodulin-dependent serine phosphatase calcineurin, which dephosphorylates NFAT proteins, resulting in their subsequent translocation to the nucleus (2). Termination of NFAT signaling occurs upon declining calcium concentrations and phosphorylation of NFAT by kinases such as GSK-3 or CK1 (3, 4). Cyclosporin A and FK506 are immunosuppressive drugs that inhibit calcineurin and thus retain NFAT proteins in the cytoplasm (5).

Function: Plays a role in the inducible expression of cytokine genes in T-cells, especially in the induction of the IL-2 or IL-4 gene transcription. Also controls gene expression in embryonic cardiac cells. Could regulate not only the activation and proliferation but also the differentiation and programmed death of T-lymphocytes as well as lymphoid and non-lymphoid cells (PubMed:10358178). Required for osteoclastogenesis and regulates many genes important for osteoclast differentiation and function (By similarity).

Subunit Structure: Member of the multicomponent NFATC transcription complex that consists of at least two components, a pre-existing cytoplasmic component NFATC2 and an inducible nuclear component NFATC1. Other members such as NFATC4, NFATC3 or members of the activating protein-1 family, MAF, GATA4 and Cbp/p300 can also bind the complex. NFATC proteins bind to DNA as monomers.

Post-translational Modifications: Phosphorylated by NFATC-kinase and GSK3B; phosphorylation induces NFATC1 nuclear exit and dephosphorylation by calcineurin promotes nuclear import. Phosphorylation by PKA and DYRK2 negatively modulates nuclear accumulation, and promotes subsequent phosphorylation by GSK3B or casein kinase 1.

Similarity: Rel Similarity Domain (RSD) allows DNA-binding and cooperative interactions with AP1 factors. The N-terminal transactivation domain (TAD-A) binds to and is activated by Cbp/p300. The dephosphorylated form contains two unmasked nuclear localization signals (NLS), which allow translocation of the protein to the nucleus. Isoforms C have a C-terminal part with an additional trans-activation domain, TAD-B, which acts as a transcriptional activator. Isoforms B have a shorter C-terminal part without complete TAD-B which acts as a transcriptional repressor.

NCBI AND UNIPROT INFORMATION

NCBI GI #	522021835
NCBI GeneID	4772
NCBI Accession #	NP_001265598.1
NCBI GenBank Nucleotide #	NM_001278669.1

UniProt Accession #	O95644; Q12865; Q15793; Q2M1S3; B5B2M4; B5B2M5; B5B2M6; B5B2M7; B5B2M8; B5B2M9; B5B2N1
Molecular Weight	Observed: 78 kDa; 101 kDa Predicted: 102 kDa
NCBI Official Full Name	nuclear factor of activated T-cells, cytoplasmic 1 isoform F
NCBI Official Synonym Full Names	nuclear factor of activated T cells 1
NCBI Official Symbol	NFATC1
NCBI Official Synonym Symbols	NFAT2; NFATc; NF-ATC; NF-ATc1.2
NCBI Protein Information	nuclear factor of activated T-cells, cytoplasmic 1
UniProt Protein Name	Nuclear factor of activated T-cells, cytoplasmic 1
UniProt Gene Name	NFATC1
UniProt Synonym Gene Names	NFAT2; NFATC; NF-ATc1; NFATc1; NF-ATc; NFATc

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/nfatc1-antibody-immunohistochemistry-western-blot-elisa/326215>