

Rabbit NFAT2 Polyclonal Antibody | anti-NFAT2 antibody

Phospho-NFAT2 (Ser294) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31381	Rabbit	Human, Mouse, Rat Predicted Reactivity: Bovine (85%), Rabbit (100%)	Western Blot, Immunohistochemistry, ELISA

PRODUCT SYNONYMS

NFAT2; Polyclonal Antibody; Phospho-NFAT2 (Ser294) 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-NFAT2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Bovine (85%), Rabbit (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-NFAT2 (Ser294) Antibody detects endogenous levels of NFAT2 only when phosphorylated at Ser294. 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.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-NFAT2 antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA (Peptide ELISA)
Application Notes	WB: 1:1000-3000 IHC: 1:50-1:200 Peptide ELISA: 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human NFAT2 around the phosphorylation site of Ser294.
Conjugation	Unconjugated
Fragment	Fab fragment
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.

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. Interacts with HOMER2 and HOMER3; this interaction may compete with calcineurin/PPP3CA-binding and hence prevent NFATC1 dephosphorylation and activation.
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.
Subcellular Location	Cytoplasm. Nucleus. Note: 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 (PubMed:16511445). Nuclear translocation of NFATC1 is enhanced in the presence of TNFSF11. Nuclear translocation is decreased in the presence of FBN1 which can bind and sequester TNFSF11 (By similarity).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)

At 1/100 staining Human colorectal cancer 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



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IHC (Immunohistochemistry)

At 1/100 staining Human kidney cancer and adjacent normal tissues 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Human ovarian cancer and adjacent normal tissues 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 primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

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IHC (Immunohistochemistry)

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ADDITIONAL INFORMATION

Related Product Information for anti-NFAT2 antibody

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. Required for osteoclastogenesis and regulates many genes important for osteoclast differentiation and function (By similarity).

NCBI AND UNIPROT INFORMATION

NCBI GI #	8928220
NCBI GeneID	4772
UniProt Accession #	O95644; Q12865; Q15793; Q2M1S3; B5B2M4; B5B2M5; B5B2M6; B5B2M7; B5B2M8; B5B2M9; B5B2N1
NCBI Official Full Name	Nuclear factor of activated T-cells, cytoplasmic 1
NCBI Official Synonym Full Names	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1
NCBI Official Symbol	NFATC1
NCBI Official Synonym Symbols	NFAT2; NFATc; NF-ATC
NCBI Protein Information	nuclear factor of activated T-cells, cytoplasmic 1; NFAT transcription complex cytosolic component
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
UniProt Entry Name	NFAC1_HUMAN

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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