

Rabbit NFAT1 Polyclonal Antibody | anti-NFAT1 antibody

Phospho-NFAT1 (Ser326) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329620	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Rabbit (100%), Dog (100%), Chicken (90%), Xenopus (85%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

NFAT1; Polyclonal Antibody; Phospho-NFAT1 (Ser326) Antibody; AI607462; cytoplasmic 2; KIAA0611; NF ATc2; NF ATp; NF-ATc2; NF-ATp; NFAC2_HUMAN; NFAT 1; NFAT pre existing subunit; NFAT pre-existing subunit; NFAT transcription complex; preexisting component; NFAT1-D; NFATc2; NFATp; Nuclear factor of activated T cells cytoplasmic 2; Nuclear factor of activated T cells cytoplasmic calcineurin dependent 2; Nuclear factor of activated T cells pre-existing component; Nuclear factor of activated T cells; Nuclear factor of activated T-cells; Preexisting nuclear factor of activated T cells 2; T cell transcription factor NFAT 1; T-cell transcription factor NFAT1; anti-NFAT1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Rabbit (100%), Dog (100%), Chicken (90%), Xenopus (85%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-NFAT1 (Ser326) Antibody detects endogenous levels of NFAT1 only when phosphorylated at Ser326. 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.
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-NFAT1 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human NFAT1 around the phosphorylation site of Ser326.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	In resting cells, phosphorylated by NFATC-kinase on at least 18 sites in the 99-363 region. Upon cell stimulation, all these sites except Ser-243 are dephosphorylated by calcineurin. Dephosphorylation induces a conformational change that simultaneously exposes an NLS and masks an NES, which results in nuclear localization. Simultaneously, Ser-53 or Ser-56 is phosphorylated; which is required for full transcriptional activity. Ubiquitinated in endothelial cells by RNF213 downstream of the non-canonical Wnt signaling pathway, leading to its degradation by the proteasome.

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. The phosphorylated form specifically interacts with XPO1; which mediates nuclear export. NFATC proteins bind to DNA as monomers. Interacts with NFATC2IP (By similarity). Interacts with FOXP3. Interacts with TBX21 (‘Thr-303’ phosphorylated form) (By similarity). Interacts with KAT2A (By similarity). Interacts with HOMER2 and HOMER3; this interaction competes with calcineurin/PPP3CA-binding and hence prevents NFATC2 dephosphorylation and activation. Interacts with protein phosphatase PPP3CA/calcineurin A.
Similarity	the 9aaTAD motif is a transactivation domain present in a large number of yeast and animal transcription factors.Rel Similarity Domain (RSD) allows DNA-binding and cooperative interactions with AP1 factors.
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.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohiostchemistry)
 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.



WB (Western Blot)
 Western blot analysis NFAT1 (Phospho-Ser326) using Rat brain tissue lysates.-/+ means absence or presence of N peptide¼non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-NFAT1 antibody	Plays a role in the inducible expression of cytokine genes in T-cells, especially in the induction of the IL-2, IL-3, IL-4, TNF-alpha or GM-CSF. Promotes invasive migration through the activation of GPC6 expression and WNT5A signaling pathway.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	27886541
NCBI GeneID	4773
NCBI Accession #	NP_775114.1
NCBI GenBank Nucleotide #	NM_173091.3
UniProt Accession #	Q13469; Q13468; Q5TFW7; Q5TFW8; Q9NPX6; Q9NQH3; Q9UJR2; B5B2N8; B5B2N9; B5B2P2; B5B2P3
Molecular Weight	100,146 Da
NCBI Official Full Name	nuclear factor of activated T-cells, cytoplasmic 2 isoform C
NCBI Official Synonym Full Names	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2
NCBI Official Symbol	NFATC2
NCBI Official Synonym Symbols	NFAT1; NFATP
NCBI Protein Information	nuclear factor of activated T-cells, cytoplasmic 2; NF-ATc2; NFAT pre-existing subunit; T cell transcription factor NFAT1; T-cell transcription factor NFAT1; NFAT transcription complex, preexisting component; preexisting nuclear factor of activated T-cell
UniProt Protein Name	Nuclear factor of activated T-cells, cytoplasmic 2

UniProt Gene Name	NFATC2
UniProt Synonym Gene Names	NFAT1; NFATP; NF-ATc2; NFATc2; NF-ATp
UniProt Entry Name	NFAC2_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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