

# NFAT2 (Phospho Ser172) Rabbit pAb

CatalogNo: YP1665

# Key Features

104kD (Calculated)

Host SpeciesReactiv• Rabbit• HumaMWIsotype

Reactivity • Human,Mouse,Rat

• IgG

Applications
• WB

## Recommended Dilution Ratios

WB 1:500-2000

### **Storage**

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

## **Basic Information**

Clonality Polyclonal

### Immunogen Information

Immunogen Synthesized peptide derived from human NFAT2 (Phospho-Ser172)

**Specificity** This antibody detects endogenous levels of NFAT2 (Phospho-Ser172) at Human, Mouse,Rat.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):LsPAS

# Target Information

Gene name	NFATC1 NFAT2 NFATC			
Protein Name	NFAT2 (Phospho-Ser172) <b>Organism</b>	Gene ID	UniProt ID	
	Human	<u>4772;</u>	<u>095644;</u>	
	Mouse		<u>088942;</u>	

- **Cellular 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 (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). .
- **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.

Alternative products: Isoform C-alpha and isoform C-beta are the strongest activator of gene transcription, followed by isoform A-alpha and isoform A-beta, whereas isoform B-alpha and isoform B-beta are the weakest. Isoform B-alpha, isoform B-beta, isoform C-alpha and isoform C-beta, both present in T-cells, can modulate their transcriptional activity, Domain: 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 Cterminal part without complete TAD-B which acts as a transcriptional repressor., Domain: Rel Similarity Domain (RSD) allows DNA-binding and cooperative interactions with AP1 factors.,Domain: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., 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., induction: Only isoforms A are inducibly expressed in T lymphocytes upon activation of the T-cell receptor (TCR) complex. Induced after co-addition of phorbol 12-myristate 13acetate (PMA) and ionomycin. Also induced after co-addition of 12-Otetradecanoylphorbol-13-acetate (TPA) and ionomycin. Weakly induced with PMA, ionomycin and cyclosporin A., PTM: Phosphorylated by NFATC-kinase; dephosphorylated by calcineurin., similarity: Contains 1 RHD (Rel-like) domain., subcellular location: Cytoplasmic for the phosphorylated form and nuclear after activation that is controlled by calcineurinmediated 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., subunit: 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.,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.,

### Validation Data

Function



Western Blot analysis of 293T using primary antibody at 1:1000 dilution 4°C, overnight. Secondary antibody(catalog#:RS23920) was diluted at 1:10000 25°C, 1.5hours

# **Contact information**

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Please scan the QR code to access additional product information: NFAT2 (Phospho Ser172) Rabbit pAb

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