

NFATc4 (Phospho Ser168/170) Rabbit pAb

CatalogNo: YP1104

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse

Applications

- WB, IHC, IF, ELISA

MW

- 140kD (Observed)

Isotype

- IgG

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.

Recommended Dilution Ratios

WB 1:500-1:2000

IHC 1:100-1:300

ELISA 1:5000

IF 1:50-200

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human NFAT3 around the phosphorylation site of Ser168 and Ser170. AA range:136-185

Specificity

This antibody detects endogenous levels of NFAT3 only when phosphorylated at Ser168 or Ser170, and dually phosphorylated at two sites. 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 When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports.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): FFsPsP

| Target Information

Gene name NFATC4

Protein Name Nuclear factor of activated T-cells cytoplasmic 4

Organism	Gene ID	UniProt ID
Human	4776 ;	Q14934 ;
Mouse	73181 ;	Q8K120 ;

Cellular Localization

Cytoplasm, cytosol . Nucleus . When hyperphosphorylated, localizes in the cytosol. When intracellular Ca(2+) levels increase, dephosphorylation by calcineurin/PPP3CA leads to translocation into the nucleus (PubMed:11997522, PubMed:18347059). MAPK7/ERK5 and MTOR regulate NFATC4 nuclear export through phosphorylation at Ser-168 and Ser-170 (PubMed:18347059). .

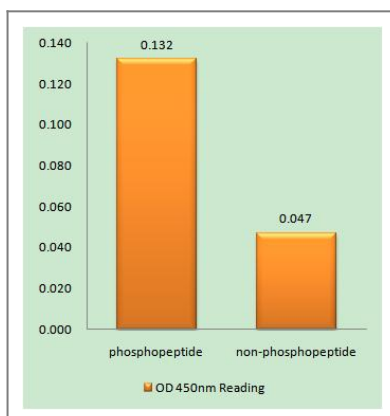
Tissue specificity

Widely expressed, with high levels in placenta, lung, kidney, testis and ovary (PubMed:18675896). Weakly expressed in spleen and thymus (PubMed:18675896). In the hippocampus, expressed in the granular layer of the dentate gyrus, in the pyramidal neurons of CA3 region, and in the hippocampal fissure (PubMed:18675896). Expressed in the heart (at protein level) (PubMed:12370307).

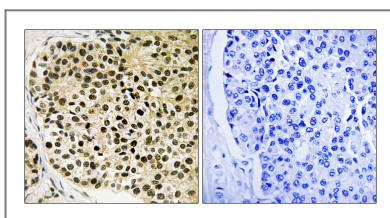
Function

Domain:Rel Similarity Domain (RSD) allows DNA-binding and cooperative interactions with AP1 factors.,Function:Plays a role in the inducible expression of cytokine genes in T-cells, especially in the induction of the IL-2 and IL-4. Transcriptionally repressed by estrogen receptors; this inhibition is further enhanced by estrogen. Increases the transcriptional activity of PPARG and has a direct role in adipocyte differentiation. May play an important role in myotube differentiation. May play a critical role in cardiac development and hypertrophy. May play a role in deafferentation-induced apoptosis of sensory neurons.,PTM:Phosphorylated by NFATC-kinases; dephosphorylated by calcineurin. Phosphorylated on Ser-168 and Ser-170 by FRAP1, IRAK1, MAPK7 and MAPK14, on Ser-213 and Ser-217 by MAPK8 and MAPK9, and on Ser-289 and Ser-344 by RPS6KA3. Phosphorylated by GSK3B.,PTM:Ubiquitinated, leading to its degradation by the proteasome and reduced transcriptional activity. Ubiquitination and reduction in transcriptional activity can be further facilitated through GSK3B-dependent phosphorylation. Polyubiquitin linkage is mainly through 'Lys-48'. ,similarity:Contains 1 IPT/TIG domain.,similarity:Contains 1 RHD (Rel-like) domain.,subcellular location: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.,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. Interacts with CREBBP, GATA4, IRAK1, MAPK8, MAPK9 and RPS6KA3.,tissue specificity:Highly expressed in placenta, lung, kidney, testis and ovary. Weakly expressed in spleen and thymus. Not expressed in peripheral blood lymphocytes. Detected in hippocampus.,

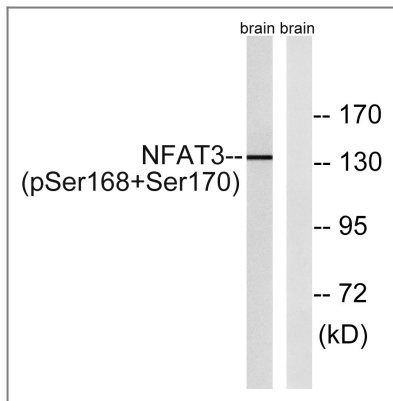
Validation Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using NFAT3 (Phospho-Ser168+Ser170) Antibody



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using NFAT3 (Phospho-Ser168+Ser170) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of NFAT3 (Phospho-Ser168+Ser170) Antibody. The lane on the right is blocked with the NFAT3 (Phospho-Ser168+Ser170) peptide.

Contact information

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NFATc4 (Phospho Ser168/170) Rabbit pAb

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