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NFATC4 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP13162b

Specification

NFATC4 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q14934

NFATC4 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 4776

Other Names
Nuclear factor of activated T-cells, cytoplasmic 4, NF-ATc4, NFATc4, T-cell transcription factor NFAT3, NF-AT3, NFATC4, NFAT3

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13162b was selected from the C-term region of NFATC4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NFATC4 Antibody (C-term) Blocking Peptide - Protein Information

Name NFATC4

Function
Ca(2+)-regulated transcription factor that is involved in several processes, including the development and function of the immune, cardiovascular, musculoskeletal, and nervous systems (PubMed:7749981, PubMed:11514544, PubMed:11997522, PubMed:17875713, PubMed:17213202, PubMed:18668201, PubMed:25663301). Involved in T-cell activation, stimulating the transcription of cytokine genes, including that of IL2 and IL4 (PubMed:7749981, PubMed:<a href="http://www.uniprot.org/citations/18668201"

target="_blank">18668201, PubMed:18347059). Along with NFATC3, involved in embryonic heart development. Involved in mitochondrial energy metabolism required for cardiac morphogenesis and function (By similarity). Transactivates many genes involved in the cardiovascular system, including AGTR2, NPPB/BNP (in synergy with GATA4), NPPA/ANP/ANF and MYH7/beta-MHC (By similarity). Involved in the regulation of adult hippocampal neurogenesis. Involved in BDNF-driven pro-survival signaling in hippocampal adult-born neurons. Involved in the formation of long-term spatial memory and long-term potentiation (By similarity). In cochlear nucleus neurons, may play a role in deafferentation-induced apoptosis during the developmental critical period, when auditory neurons depend on afferent input for survival (By similarity). Binds to and activates the BACE1/Beta-secretase 1 promoter, hence may regulate the proteolytic processing of the amyloid precursor protein (APP) (PubMed:25663301). Plays a role in adipocyte differentiation (PubMed:11997522). May be involved in myoblast differentiation into myotubes (PubMed:17213202). Binds the consensus DNA sequence 5'-GGAAAAT-3' (Probable). In the presence of CREBBP, activates TNF transcription (PubMed:11514544). Binds to PPARG gene promoter and regulates its activity (PubMed:11997522). Binds to PPARG and REG3G gene promoters (By similarity).

Cellular Location
Cytoplasm, cytosol. Nucleus. Note=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 Location
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)

NFATC4 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

NFATC4 Antibody (C-term) Blocking Peptide - Images

NFATC4 Antibody (C-term) Blocking Peptide - Background

The product of this gene is a member of the nuclearfactors of activated T cells DNA-binding transcription complex.This complex consists of at least two components: a preexistingcytosolic component that translocates to the nucleus upon T cellreceptor (TCR) stimulation and an inducible nuclear component.Other members of this family of nuclear factors of activated Tcells also participate in the formation of this complex. Theproduct of this gene plays a role in the inducible expression ofcytokine genes in T cells, especially in the induction of the IL-2and IL-4. Alternatively spliced transcript variants encodingdifferent isoforms have been noted for this gene. [provided byRefSeq].

NFATC4 Antibody (C-term) Blocking Peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Al-Daraji, W.I., et al. J. Cutan. Pathol. 37 (9), E21-E36 (2010) :Fougere, M., et al. Oncogene 29(15):2292-2301(2010)Davila, S., et al. Genes Immun. 11(3):232-238(2010)Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)