10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NFATC1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13900b

Product Information

Application	WB, IHC-P, E
Primary Accession	O95644
Other Accession	NP_765977.1, NP_765978.1, NP_765975.1, NP_006153.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34041
Calculated MW	101243
Antigen Region	898-927

Additional Information

Gene ID	4772
Other Names	Nuclear factor of activated T-cells, cytoplasmic 1, NF-ATc1, NFATc1, NFAT transcription complex cytosolic component, NF-ATc, NFATc, NFATC1, NFAT2, NFATC
Target/Specificity	This NFATC1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 898-927 amino acids from the C-terminal region of human NFATC1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NFATC1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NFATC1
Synonyms	NFAT2, NFATC

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 (PubMed:10358178). Required for osteoclastogenesis and regulates many genes important for osteoclast differentiation and function (By similarity).
Cellular 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. Translocation to the nucleus is increased in the presence of calcium in pre-osteoblasts (By similarity). 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). {ECO:0000250|UniProtKB:O88942, ECO:0000269|PubMed:16511445}
Tissue Location	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.

Background

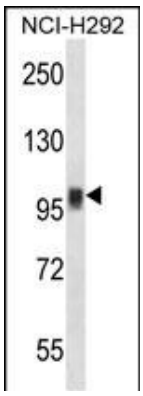
The product of this gene is a component of the nuclear factor of activated T cells DNA-binding transcription complex. This complex consists of at least two components: a preexisting cytosolic component that translocates to the nucleus upon T cell receptor (TCR) stimulation, and an inducible nuclear component. Proteins belonging to this family of transcription factors play a central role in inducible gene transcription during immune response. The product of this gene is an inducible nuclear component. It functions as a major molecular target for the immunosuppressive drugs such as cyclosporin A. Five transcript variants encoding distinct isoforms have been identified for this gene. Different isoforms of this protein may regulate inducible expression of different cytokine genes.

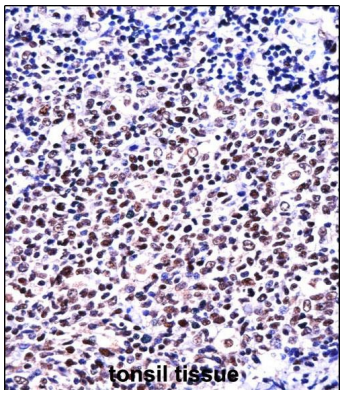
References

Liu, Y.J., et al. Obesity (Silver Spring) 18(12):2339-2346(2010)
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Chen, C., et al. Biocell 34(2):57-63(2010)
Davila, S., et al. Genes Immun. 11(3):232-238(2010)
Amaral, F.R., et al. J. Oral Pathol. Med. 39(3):269-274(2010)

Images

NFATC1 Antibody (C-term) (Cat. #AP13900b) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the NFATC1 antibody detected the NFATC1 protein (arrow).





NFATC1 Antibody (C-term) (AP13900b)immunohistochemistry analysis in formalin fixed and paraffin embedded human tonsil tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of NFATC1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Up-regulated expression of CD147 gene in malignant bone tumor and the possible induction mechanism during osteoclast formation.
- Effects of secreted frizzled-related protein 1 on proliferation, migration, invasion, and apoptosis of colorectal cancer cells.