Datasheet for ABIN967559

anti-NFATC1 antibody

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Overview

Quantity:	0.1 mg
Target:	NFATC1
Reactivity:	Human, Mouse
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunoprecipitation (IP)

Product Details

Brand:	BD Pharmingen™
Clone:	7A6
Isotype:	IgG1 kappa
Cross-Reactivity:	Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	NFATC1
Alternative Name:	NF-ATc1 (NFATC1 Products)
Background:	The NF-AT family of transcription factors are regulators of early immune response genes in T cells following their activation by CD40L, FasL and nterleukins including IL-2, -3, -4 and -5. NF-AT proteins function in both signal transduction and transcription control. The DNA binding, active NF-AT complex contains a cytoplasmic, Ca2+/calcineurin dependent, cyclosporin sensitive subunit, designated NF-ATc, which is present in the cytoplasm of resting cells. Upon cell activation, NF-ATc is dephosphorylated and thus activated by calcineurin, resulting in rapid translocation of NF-ATc to the nucleus. The active NF-AT complex also contains a nuclear component, NF-ATn. In vitro, NF-AT cooperates with the mitogenic transcription factor AP-1 to induce multiple cytokine genes. NF-ATc is encoded by four genes: NF-ATc1 (originally named NF-ATc), NF-ATc2 (originally named NF-ATp), NF-ATc3 (NF-AT3) and NF- ATc4 (NF-AT4). These proteins are differentially expressed in tissues, suggesting that each may activate distinct sets of genes. NF-ATc1 is expressed in lymphoid organs and is upregulated in activated T cell and thymocytes. NF-ATc1 is required for the development of T cells and has been shown to contribute to the production of IL-2 and the development of Th2 responses. 7A6 recognizes human and mouse NF-ATc1. The antibody recognizes a region between amino acids 197 to 304 of human NF-ATc1, which lies outside the region of homology between NF-ATc1 and NF-ATc2.3 Please note that in the original publication for the antibody (Northrop et al. 1994), the clone name 7A6 is not specifically identified.
Molecular Weight:	100-120 kDa
Pathways:	RTK Signaling, WNT Signaling, Fc-epsilon Receptor Signaling Pathway

Application Details

Application Notes:	7A6 may be used for western blot analysis of NF-ATc1 (1-2 µg/ml). Note that while the predicted M W of NF-ATc is ~100 kDa, the observed M W may range between 100 to 120 kDa due to post-translational modification of NF-ATc. Other applications include immunoprecipitation (2 µg/ml), mobility shift assays (EMSA) and immunofluorescence microscopy of paraformaldehyde-fixed, tissue cultured cells. Jurkat human T cells (ATCC TIB-152) are suggested as a positive control for expression of NF-ATc.
Comment:	Related Products: ABIN967389, ABIN968537
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:

Yoshida, Nishina, Takimoto, Marengère, Wakeham, Bouchard, Kong, Ohteki, Shahinian, Bachmann, Ohashi, Penninger, Crabtree, Mak: "The transcription factor NF-ATc1 regulates lymphocyte proliferation and Th2 cytokine production." in: **Immunity**, Vol. 8, Issue 1, pp. 115-24, (1998) (PubMed).

Timmerman, Healy, Ho, Chen, Goodnow, Crabtree: "Redundant expression but selective utilization of nuclear factor of activated T cells family members." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 159, Issue 6, pp. 2735-40, (1997) (PubMed).

Timmerman, Clipstone, Ho, Northrop, Crabtree: "Rapid shuttling of NF-AT in discrimination of Ca2+ signals and immunosuppression." in: **Nature**, Vol. 383, Issue 6603, pp. 837-40, (1996) (PubMed).

Northrop, Ho, Chen, Thomas, Timmerman, Nolan, Admon, Crabtree: "NF-AT components define a family of transcription factors targeted in T-cell activation." in: **Nature**, Vol. 369, Issue 6480, pp. 497-502, (1994) (PubMed).

Crabtree: "Contingent genetic regulatory events in T lymphocyte activation." in: **Science (New York, N.Y.)**, Vol. 243, Issue 4889, pp. 355-61, (1989) (PubMed).

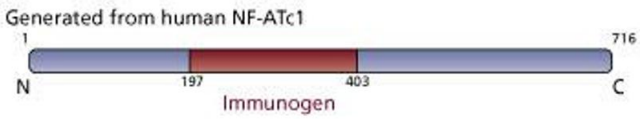
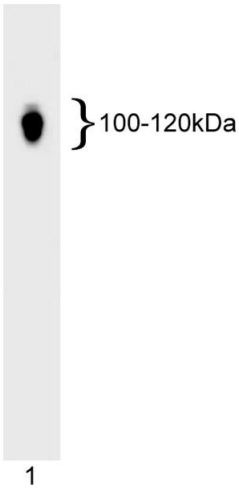


Image 1.

Western Blotting

Image 2. Western blot analysis of NFATc1. Lysate from Jurkat T cells was probed with anti-NF-ATc1 (ABIN967559). The antibody identifies NF-ATc1 isoforms at a range of molecular weights from ~100 to 120 kDa.



Western Blotting

Image 3.