abcam

Product datasheet

Anti-NFAT1 antibody [EPR24658-149] - BSA and Azide free ab283659

Recombinant RabMAb

3 Images

Overview

Product name	Anti-NFAT1 antibody [EPR24658-149] - BSA and Azide free
Description	Rabbit monoclonal [EPR24658-149] to NFAT1 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB **Unsuitable for:** ChIP,Flow Cyt (Intra),ICC/IF,IHC-P or IP
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Ramos, Raji, Daudi and EL4 whole cell lysates.
General notes	ab283659 is the carrier-free version of **ab283649**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	pH: 7.2 Constituent: 100% PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR24658-149
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab283659 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

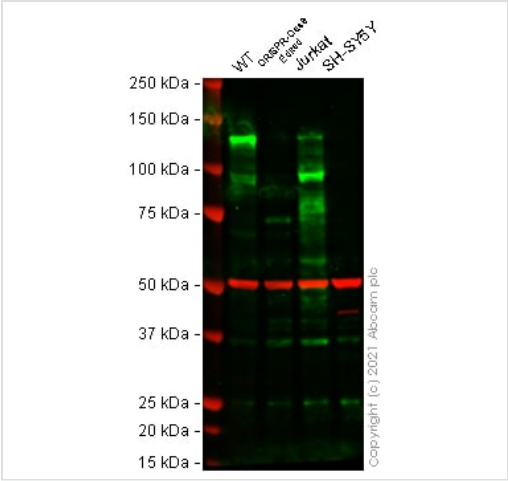
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 14 kDa.

Application notes Is unsuitable for ChIP,Flow Cyt (Intra),ICC/IF,IHC-P or IP.

Target

Function	Plays a role in the inducible expression of cytokine genes in T-cells, especially in the induction of the IL-2, IL-3, IL-4, TNF-alpha or GM-CSF.
Tissue specificity	Expressed in thymus, spleen, heart, testis, brain, placenta, muscle and pancreas.
Sequence similarities	Contains 1 RHD (Rel-like) domain.
Domain	Rel Similarity Domain (RSD) allows DNA-binding and cooperative interactions with AP1 factors.
Post-translational modifications	In resting cells, phosphorylated by NFATC-kinase on at least 18 sites in the 99-363 region. Upon cell stimulation, all these sites except Ser-243 are dephosphorylated by calcineurin. Dephosphorylation induces a conformational change that simultaneously exposes an NLS and masks an NES, which results in nuclear localization. Simultaneously, Ser-53 or Ser-56 is phosphorylated; which is required for full transcriptional activity.
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.

Images



Western blot - Anti-NFAT1 antibody [EPR24658-149] - BSA and Azide free (ab283659)

All lanes : Anti-NFAT1 antibody [EPR24658-149] (**ab283649**) at 1/1000 dilution

Lane 1 : Wild-type Raji cell lysate
Lane 2 : NFATC2 CRISPR-Cas9 edited Raji cell lysate
Lane 3 : Jurkat cell lysate
Lane 4 : SH-SY5Y cell lysate

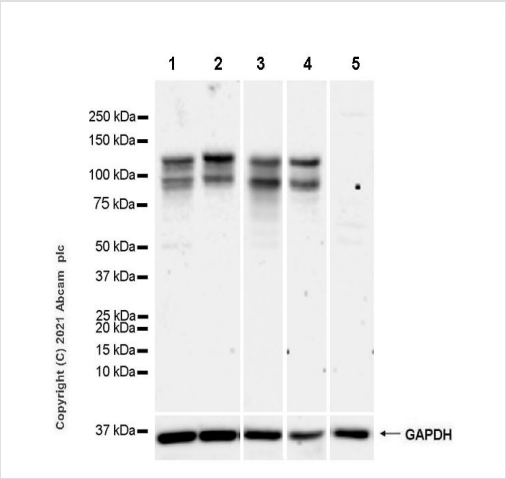
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 14 kDa
Observed band size: 100 kDa

This data was developed using **ab283649**, the same antibody clone in a different buffer formulation.

False colour image of Western blot: Anti-NFAT1 antibody [EPR24658-149] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (**ab7291**) loading control staining at 1/20000 dilution, shown in red. In Western blot, **ab283649** was shown to bind specifically to NFAT1. A band was observed at 100 kDa in wild-type Raji cell lysates with no signal observed at this size in NFATC2 CRISPR-Cas9 edited cell line **ab280906** (CRISPR-Cas9 edited cell lysate **ab282940**). The band observed in the CRISPR-Cas9 edited lysate lane below 100 kDa is likely to represent a truncated form of NFAT1. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and NFATC2 CRISPR-Cas9 edited Raji cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Western blot - Anti-CGRP-I antibody [EPR24658-149] - BSA and Azide free (ab283659)

All lanes : Anti-NFAT1 antibody [EPR24658-149] (**ab283649**) at 1/1000 dilution

Lane 1 : Ramos (human Burkitt's lymphoma B lymphocyte), whole cell lysate
Lane 2 : Raji (human Burkitts lymphoma B lymphocyte), whole cell lysate
Lane 3 : Daudi (human Burkitts lymphoma lymphoblast), whole cell lysate
Lane 4 : EL4 (mouse lymphoma T lymphocyte), whole cell lysate
Lane 5 : HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

Predicted band size: 14 kDa
Observed band size: 100, 140 kDa

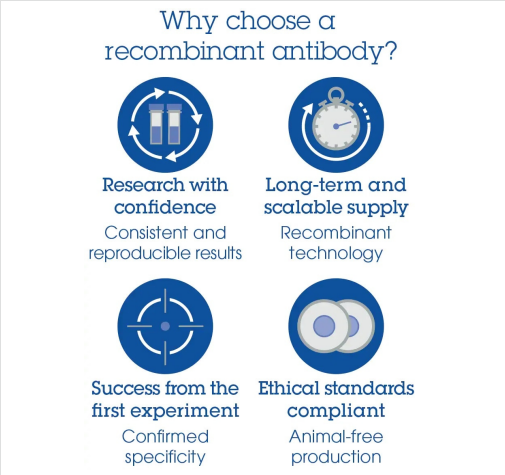
This data was developed using **ab283649**, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The molecular weight observed is consistent with what has been described in the literature (PMID:21078663, PMID:25696812).

Negative control: Hela (PMID:21078663)

Exposure time: Lane 1, 2, 4, 5: 3 minutes ; Lane 3: 92 seconds



Anti-CGRP-I antibody [EPR24658-149] - BSA and Azide free (ab283659)

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