


## Product datasheet

### Anti-NFAT2 antibody [7A6] ab2796

KO VALIDATED

★★★★★ 9 Abreviews 42 References 4 Images

#### Overview

Product name	Anti-NFAT2 antibody [7A6]
Description	Mouse monoclonal [7A6] to NFAT2
Host species	Mouse
Tested applications	<b>Suitable for:</b> WB, IHC-P, Flow Cyt (Intra)
Species reactivity	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat, Hamster, Non human primates 
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: FFPE human Hodgkin's lymphoma tissue sections.
General notes	<p>This monoclonal antibody is manufactured by Abcam. If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a> or you can find more information <a href="#">here</a>.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituent: PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	7A6

<b>Isotype</b>	IgG1
<b>Light chain type</b>	kappa

## Applications

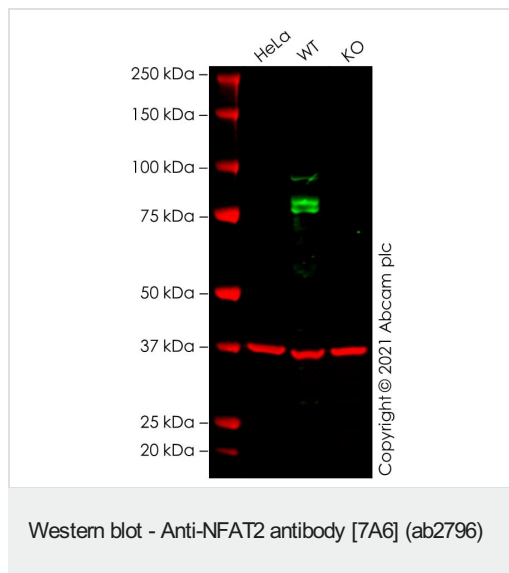
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab2796 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (2)	Use at an assay dependent concentration.
IHC-P	★★★★★ (3)	Use at an assay dependent concentration.
Flow Cyt (Intra)		Use 1µg for 10 <sup>6</sup> cells. <b>ab170190</b> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	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.
<b>Sequence similarities</b>	Contains 1 RHD (Rel-like) domain.
<b>Domain</b>	Rel Similarity Domain (RSD) allows DNA-binding and cooperative interactions with AP1 factors. The N-terminal transactivation domain (TAD-A) binds to and is activated by Cbp/p300. The dephosphorylated form contains two unmasked nuclear localization signals (NLS), which allow translocation of the protein to the nucleus. Isoforms C have a C-terminal part with an additional trans-activation domain, TAD-B, which acts as a transcriptional activator. Isoforms B have a shorter C-terminal part without complete TAD-B which acts as a transcriptional repressor.
<b>Post-translational modifications</b>	Phosphorylated by NFATC-kinase; dephosphorylated by calcineurin.
<b>Cellular localization</b>	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



**All lanes :** Anti-NFAT2 antibody [7A6] (ab2796) at 5 µg/ml

**Lane 1 :** HeLa cell lysate

**Lane 2 :** Wild-type HAP1 cell lysate

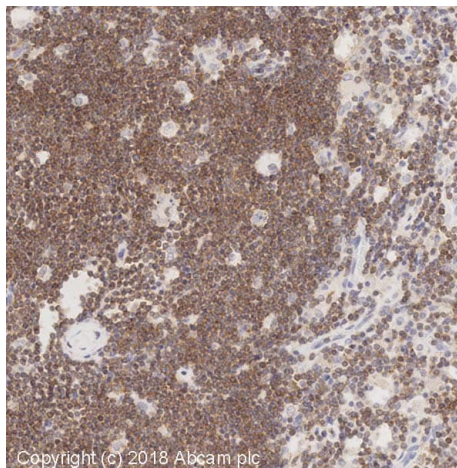
**Lane 3 :** NFATC1 knockout HAP1 cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Observed band size:** 75,80,90 kDa

False colour image of Western blot: Anti-NFAT2 antibody [7A6] staining at 5 µg/ml, shown in green; Rabbit Anti-GAPDH antibody [EPR16891] ([ab181602](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab2796 was shown to bind specifically to NFAT2. A band was observed at 75/80/90 kDa in wild-type HAP1 cell lysates with no signal observed at this size in NFATC1 knockout cell line. To generate this image, wild-type and NFATC1 knockout HAP1 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<sup>®</sup> 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-Mouse IgG H&L (IRDye<sup>®</sup> 800CW) preabsorbed ([ab216772](#)) and Goat anti-Rabbit IgG H&L (IRDye<sup>®</sup> 680RD) preabsorbed ([ab216777](#)) at 1/20000 dilution.

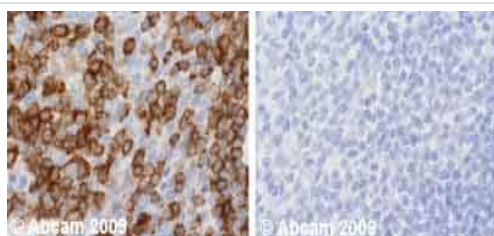


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFAT2 antibody [7A6] (ab2796)

IHC image of NFAT2 staining in a section of formalin-fixed paraffin-embedded normal human Hodgkin's lymphoma\* performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab2796, 1ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*\*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre*



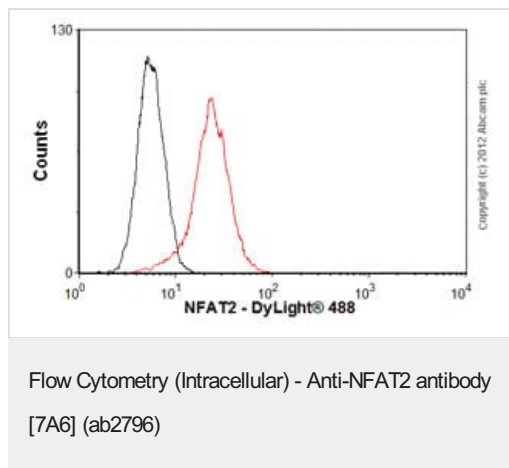
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFAT2 antibody [7A6] (ab2796)

ab2796 staining human normal tonsil tissue. Staining is localized to cytoplasm and nucleus.

**Left panel:** with primary antibody at 1 µg/ml. **Right panel:** Isotype control.

Sections were stained using an automated system DAKO Autostainer Plus, at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H<sub>2</sub>O<sub>2</sub> in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS), then incubated with primary antibody for 20 minutes, and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with hematoxylin and coverslipped under DePeX.

Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.



Overlay histogram showing Jurkat cells stained with ab2796 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab2796, 1 µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight<sup>®</sup> 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2 µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Jurkat cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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