

## Product datasheet

# Anti-NFκB p105 / p50 antibody - N-terminal ab231490

1 Image

### Overview

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<b>Product name</b>	Anti-NFκB p105 / p50 antibody - N-terminal
<b>Description</b>	Rabbit polyclonal to NFκB p105 / p50 - N-terminal
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Chicken, Dog 
<b>Immunogen</b>	Synthetic peptide within Human NFκB p105/ p50 aa 1-100 (N terminal). The exact sequence is proprietary. Database link: <a href="#">P19838</a>
<b>Positive control</b>	IHC-P: Human tonsil tissue.
<b>General notes</b>	<p><b>This product is FOR RESEARCH USE ONLY. For commercial use, please contact <a href="mailto:partnerships@abcam.com">partnerships@abcam.com</a>.</b></p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&amp;As.</p>

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.60 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab231490** 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
IHC-P		1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Primary antibody incubation for 10 minutes at room temperature.

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## Target

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**Function**

NF-kappa-B is a pleiotropic transcription factor which is present in almost all cell types and is involved in many biological processes such as inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NF-kappa-B is a homo- or heterodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFKB1/p105, NFKB1/p50, REL and NFKB2/p52 and the heterodimeric p65-p50 complex appears to be most abundant one. The dimers bind at kappa-B sites in the DNA of their target genes and the individual dimers have distinct preferences for different kappa-B sites that they can bind with distinguishable affinity and specificity. Different dimer combinations act as transcriptional activators or repressors, respectively. NF-kappa-B is controlled by various mechanisms of post-translational modification and subcellular compartmentalization as well as by interactions with other cofactors or corepressors. NF-kappa-B complexes are held in the cytoplasm in an inactive state complexed with members of the NF-kappa-B inhibitor (I-kappa-B) family. In a conventional activation pathway, I-kappa-B is phosphorylated by I-kappa-B kinases (IKKs) in response to different activators, subsequently degraded thus liberating the active NF-kappa-B complex which translocates to the nucleus. NF-kappa-B heterodimeric p65-p50 and RelB-p50 complexes are transcriptional activators. The NF-kappa-B p50-p50 homodimer is a transcriptional repressor, but can act as a transcriptional activator when associated with BCL3. NFKB1 appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by p105 and generation of p50 by a cotranslational processing. The proteasome-mediated process ensures the production of both p50 and p105 and preserves their independent function, although processing of NFKB1/p105 also appears to occur post-translationally. p50 binds to the kappa-B consensus sequence 5'-GGRNYYCC-3', located in the enhancer region of genes involved in immune response and acute phase reactions. In a complex with MAP3K8, NFKB1/p105 represses MAP3K8-induced

MAPK signaling; active MAP3K8 is released by proteasome-dependent degradation of NFkB1/p105.

#### Sequence similarities

Contains 7 ANK repeats.  
Contains 1 death domain.  
Contains 1 RHD (Rel-like) domain.

#### Domain

The C-terminus of p105 might be involved in cytoplasmic retention, inhibition of DNA-binding, and transcription activation.  
Glycine-rich region (GRR) appears to be a critical element in the generation of p50.

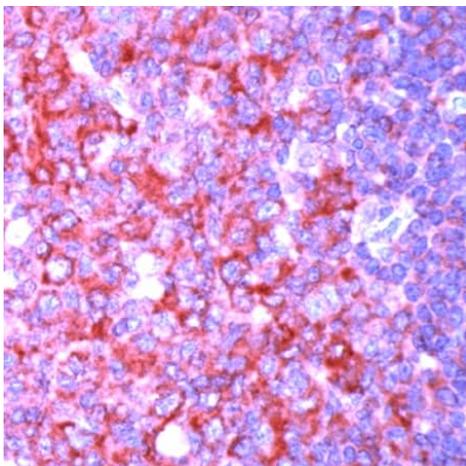
#### Post-translational modifications

While translation occurs, the particular unfolded structure after the GRR repeat promotes the generation of p50 making it an acceptable substrate for the proteasome. This process is known as cotranslational processing. The processed form is active and the unprocessed form acts as an inhibitor (I kappa B-like), being able to form cytosolic complexes with NF-kappa B, trapping it in the cytoplasm. Complete folding of the region downstream of the GRR repeat precludes processing.  
Phosphorylation at 'Ser-903' and 'Ser-907' primes p105 for proteolytic processing in response to TNF-alpha stimulation. Phosphorylation at 'Ser-927' and 'Ser-932' are required for BTRC/BTRCP-mediated proteolysis.  
Polyubiquitination seems to allow p105 processing.  
S-nitrosylation of Cys-61 affects DNA binding.

#### Cellular localization

Nucleus. Cytoplasm. Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor.

## Images



Formalin-fixed, paraffin-embedded human tonsil tissue stained for NFkB p105 / p50 using ab231490 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFkB p105 / p50 antibody - N-terminal (ab231490)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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