



## Product datasheet

### Anti-NFkB p105 / p50 antibody ab209795

[4 References](#) [6 Images](#)

#### Overview

<b>Product name</b>	Anti-NFkB p105 / p50 antibody
<b>Description</b>	Rabbit polyclonal to NFkB p105 / p50
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC, WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment corresponding to Human NFkB p105/ p50 aa 350-550. Database link: <a href="#">P19838</a>
	 <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a>
<b>Positive control</b>	WB: SK-BR-3 and Daudi cell lysates; ICC: A-431 cells; IHC-P: Human lymph node, colon, and urinary bladder tissues.
<b>General notes</b>	<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

<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. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.02% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine)
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab209795 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
ICC		Use a concentration of 0.25 - 2 µg/ml.
WB		Use a concentration of 0.04 - 0.4 µg/ml. Predicted molecular weight: 105 kDa.
IHC-P		1/200 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

## Target

### 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.

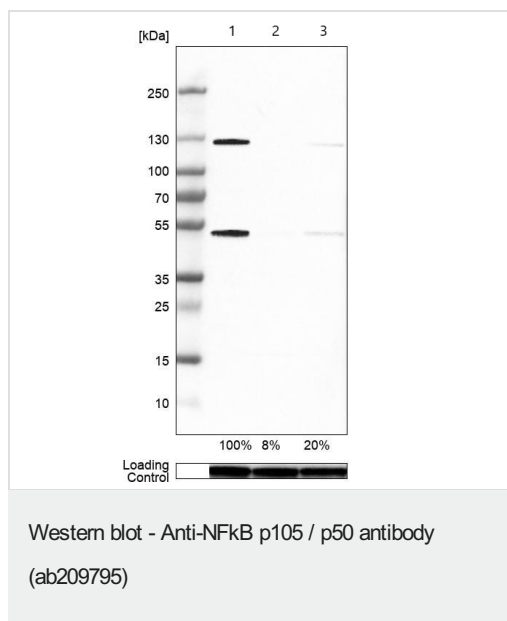
Polyubiquitination seems to allow p105 processing.

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



**All lanes :** Anti-NFkB p105 / p50 antibody (ab209795) at 0.4 µg/ml

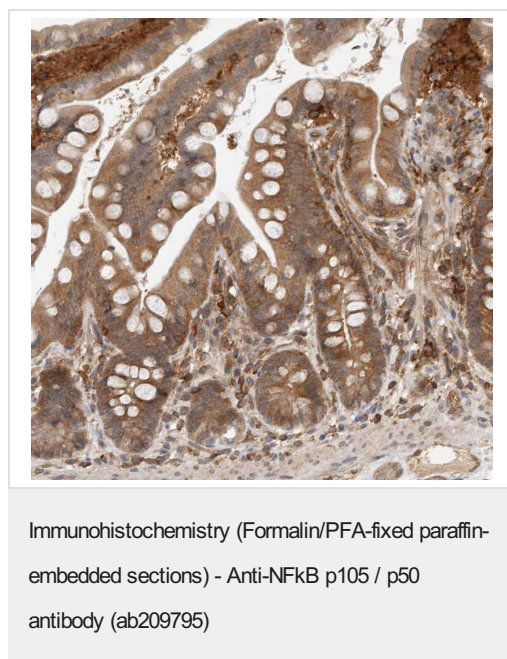
**Lane 1 :** SK-BR-3 (human mammary gland adenocarcinoma cell line) transfected with control siRNA, cell lysate

**Lane 2 :** SK-BR-3 transfected with target specific siRNA probe #1, cell lysate

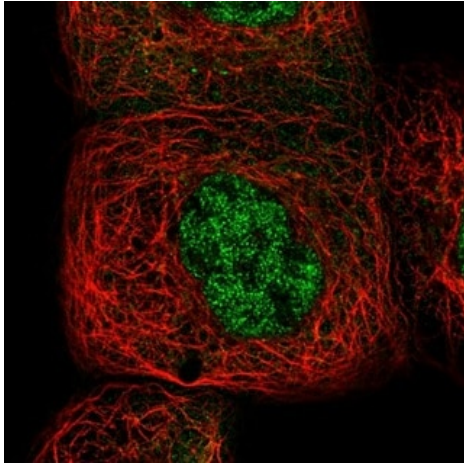
**Lane 3 :** SK-BR-3 transfected with target specific siRNA probe #2, cell lysate

**Predicted band size:** 105 kDa

**Loading control:** Anti-GAPDH

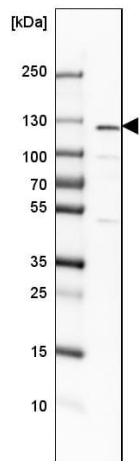


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling NFkB p105 / p50 with ab209795 at 1/200 dilution. Heat mediated antigen retrieval performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunofluorescent analysis of A431 cells (PFA-fixed/Triton X-100 permeabilized) labeling NFκB p105 / p50 with ab209795 at 4 µg/ml (green).

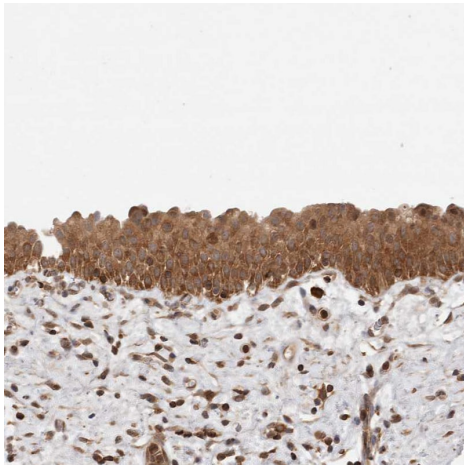
Immunocytochemistry - Anti-NFκB p105 / p50 antibody (ab209795)



Anti-NFκB p105 / p50 antibody (ab209795) at 0.4 µg/ml + Daudi (human Burkitt's lymphoma cell line) cell lysate

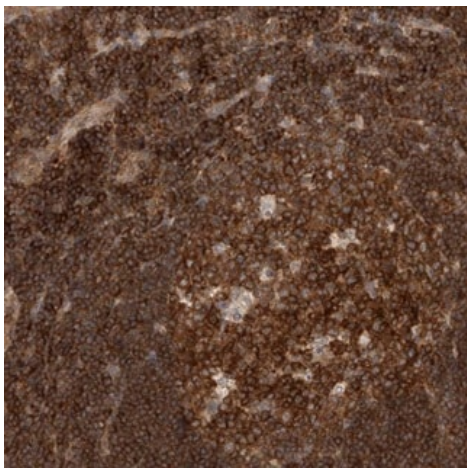
**Predicted band size: 105 kDa**

Western blot - Anti-NFκB p105 / p50 antibody (ab209795)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFkB p105 / p50 antibody (ab209795)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human urinary bladder tissue labelling NFkB p105 / p50 with ab209795 at 1/200 dilution. Heat mediated antigen retrieval performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFkB p105 / p50 antibody (ab209795)

Immunohistochemical analysis of Paraffin-embedded Human lymph node tissue labeling NFkB p105 / p50 with ab209795 at 1/200 dilution.

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

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