



Product datasheet

Anti-NFkB p105 / p50 antibody ab209795

2 References 6 Images

Overview

Product name	Anti-NFkB p105 / p50 antibody
Description	Rabbit polyclonal to NFkB p105 / p50
Host species	Rabbit
Tested applications	Suitable for: ICC, WB, IHC-P
Species reactivity	Reacts with: Human
Immunogen	<p>Recombinant fragment corresponding to Human NFkB p105/ p50 aa 396-538. Sequence:</p> <p>GTGSTGPGYSFPHYGFPTYGGITFHPGTTKSNAGMKHGTM DTESKKDPEG CDKSDDKNTVNLFGKVIETTEQDQEPSEATVGNGEVTLTY ATGTKEESAG VQDNLFLEKAMQLAKRHANALFDYAVTGDVKMLLAVQRH LTAV</p> <p>Database link: P19838</p> <p style="text-align: right;">  Run BLAST with  Run BLAST with </p>
Positive control	WB: SK-BR-3 and Daudi cell lysates; ICC: A-431 cells; IHC-P: Human lymph node, colon, and urinary bladder tissues.
General notes	<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 & 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 & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications & 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>

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&As.

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

Applications

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'-GGRNNYYCC-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.

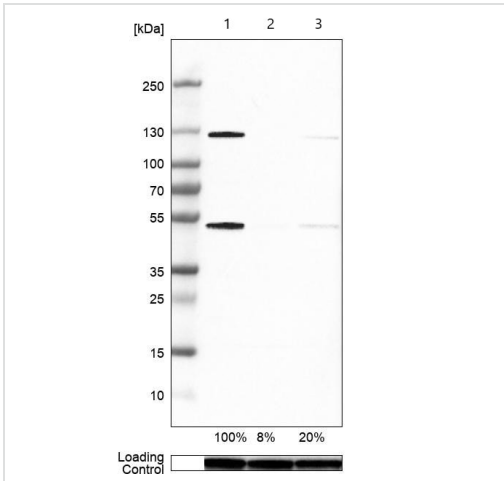
Post-translational modifications

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



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

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

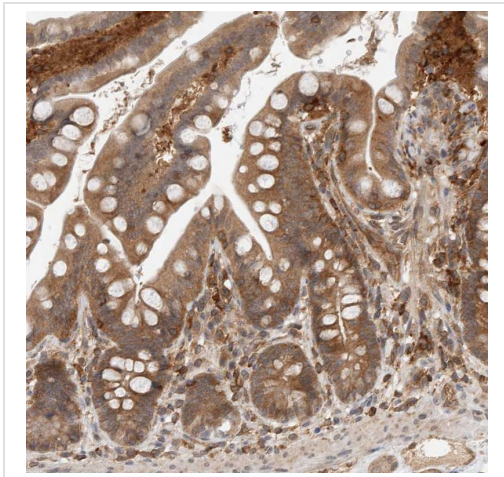
Lane 1 : SK-BR-3 (human mammary gland adenocarcinoma cell line) transfected with control siRNA, cell lysate

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

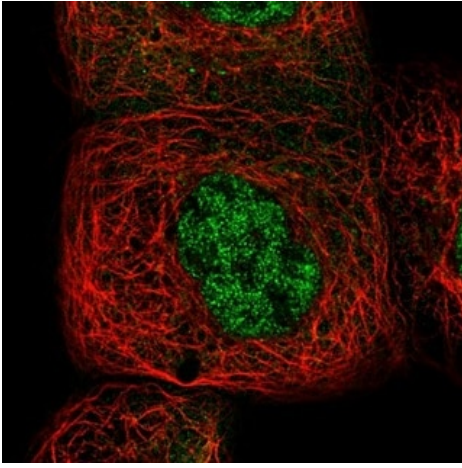
Predicted band size: 105 kDa

Loading control: Anti-GAPDH



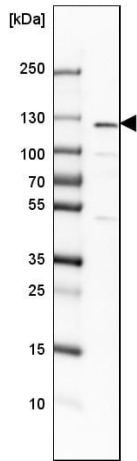
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFkB p105 / p50 antibody (ab209795)

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.



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

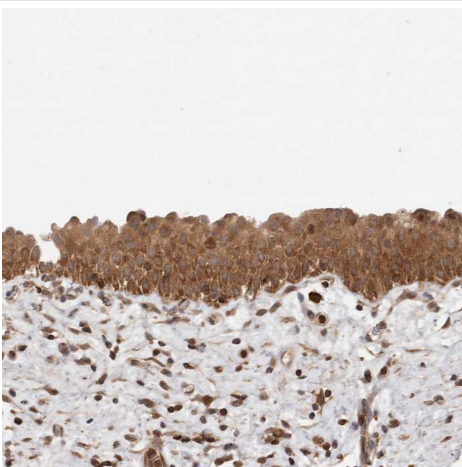
Immunofluorescent analysis of A431 cells (PFA-fixed/Triton X-100 permeabilized) labeling NFkB p105 / p50 with ab209795 at 4 μ g/ml (green).



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

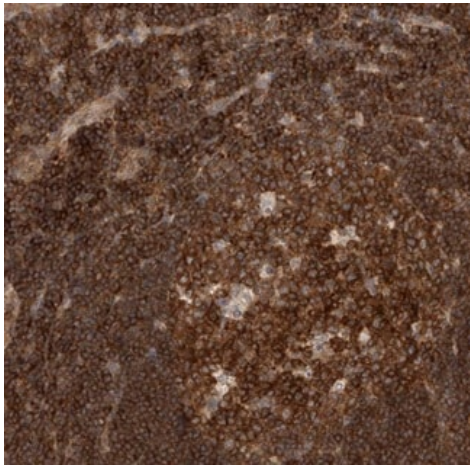
Anti-NFkB p105 / p50 antibody (ab209795) at 0.4 μ g/ml + Daudi (human Burkitt's lymphoma cell line) cell lysate

Predicted band size: 105 kDa



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.



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

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

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors