abcam

ab305263

Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133]

Recombinant | KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	1298CT792.105.117.133
Purification technique	Affinity purification Protein A
Concentration	0.974 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NFKB1

Function

NF-kappa-B is a pleiotropic transcription factor present in almost all cell types and is the endpoint of a series of signal transduction events that are initiated by a vast array of stimuli related to 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. Nuclear factor NF-kappa-B p105 subunit. P105 is the precursor of the active p50 subunit (Nuclear factor NF-kappa-B p50 subunit) of the nuclear factor NF-kappa-B (PubMed:1423592). Acts as a cytoplasmic retention of attached NF-kappa-B proteins by p105 (PubMed:1423592). Nuclear factor NF-kappa-B p50 subunit. Constitutes the active form, which associates with RELA/p65 to form the NF-kappa-B p65-p50 complex to form a transcription factor (PubMed:1740106, PubMed:7830764). Together with RELA/p65, 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 (PubMed:1740106, PubMed:7830764).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your

experiments, please contact orders@abcam.com

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

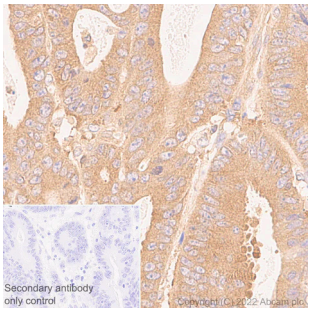
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

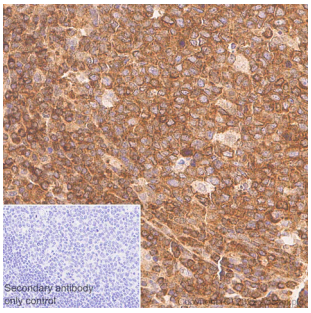
Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images



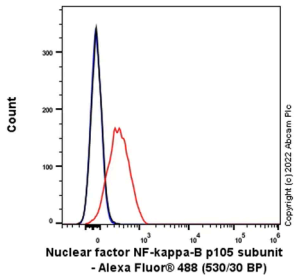
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263)

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling NFkB p105 / p50 with ab305263 at 1/2000 dilution (0.487 µg/ml) followed by ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on human colon cancer. The section was incubated with ab305263 for 30 mins at room temperature, followed by anti-mouse IgG1 antibody (ab125913) for 8 mins during the LeicaDS9800 kit staining procedure. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263)

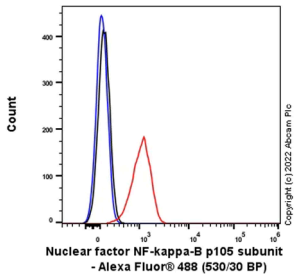
Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling NFkB p105 / p50 with ab305263 at 1/2000 dilution (0.487 µg/ml) followed by ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on human tonsil. The section was incubated with ab305263 for 30 mins at room temperature, followed by anti-mouse IgG1 antibody (ab125913) for 8 mins during the LeicaDS9800 kit staining procedure. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263)

NFkB p105 / p50 Flow Cytometry (Intracellular) staining of Raji (human Burkitt's lymphoma B lymphocyte) using mouse Anti-NFkB p105 / p50 antibody

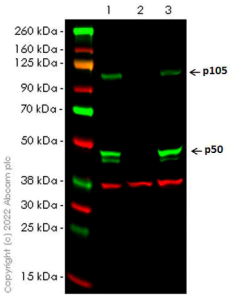
Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized Raji (human Burkitt's lymphoma B lymphocyte) cells labeling NFkB p105 / p50 with ab305263 at 1/100 dilution (1µg) (Red) compared with a Mouse monoclonal IgG (Black) isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti-Mouse IgG (Alexa Fluor® 488, ab150113) at 1/2000 dilution was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263)

NFkB p105 / p50 Flow Cytometry (Intracellular) staining of HeLa (human cervix adenocarcinoma epithelial cell) using mouse Anti-NFkB p105 / p50 antibody

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labeling NFkB p105 / p50 with ab305263 at 1/100 dilution (1µg) (Red) compared with a Mouse monoclonal IgG (Black) isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti-Mouse IgG (Alexa Fluor® 488, ab150113) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263)

NFkB p105 / p50 Western blot staining using mouse Anti-NFkB p105 / p50 antibody

Blocking and diluting buffer and concentration: Intercept® (TBS) Blocking Buffer diluted with an equal volume of 0.1% TBS. False colour image of Western blot: Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263) staining at 1/1000 dilution, shown in green; Rabbit anti-GAPDH antibody [16891] (ab181602) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab305263 was shown to bind specifically to NFkB p105 / p50. A band was observed at 50/105 kDa in wild-type HAP1 cell lysates with no signal observed at this size in NFkB p105 / p50 knockout cell line. To generate this image, wild-type and NFkB p105 / p50 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® 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® 800CW) (ab216772) and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) (ab216777) at 1/10000 dilution.
All lanes:
Western blot - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263) at 1/1000 dilution

Lane 1:
Wild-type HAP1(human chronic myelogenous leukemia near-haploid cell line), whole cell lysate at 20 µg

Lane 2:
NFkB p105 / p50 knockout HAP1, whole cell lysate at 20 µg

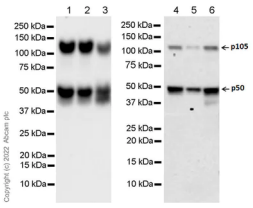
Lane 3:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Secondary

Lanes 1 - 3:
Western blot - Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (ab216777) at 1/10000 dilution

Lanes 1 - 3:
Western blot - Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (ab216772) at 1/10000 dilution

Observed band size: 50 kDa, 105 kDa



Western blot - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. Exposure times: Lanes 1-3: 26 seconds Lanes 4-6: 3 minutes
All lanes:
Western blot - Anti-NFkB p105 / p50 antibody [1298CT792.105.117.133] (ab305263) at 1/1000 dilution

Lane 1:
Raji (human Burkitts lymphoma B lymphocyte) whole cell lysate at 10 µg

Lane 2:
Daudi (human Burkitts lymphoma lymphoblast) whole cell lysate at 10 µg

Lane 3:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 10 µg

Lane 4:
Human cerebellum tissue lysate at 10 µg

Lane 5:
Human heart tissue lysate at 10 µg

Lane 6:
Human kidney tissue lysate at 10 µg

Secondary

All lanes:
Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/10000 dilution

Observed band size: 50 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.