abcam

ab247279

Anti-Rel B antibody [EP614Y] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP614Y
Purification technique	Affinity purification Protein A

Reactivity data

IP

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ChIP

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information RELB

Function

NF-kappa-B is a pleiotropic transcription factor which is present in almost all cell types and is involved in many biological processed 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. 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 RelB-p50 and RelB-p52 complexes are transcriptional activators. RELB neither associates with DNA nor with RELA/p65 or REL. Stimulates promoter activity in the presence of NFKB2/p49. As a member of the NUPR1/RELB/IER3 survival pathway, may provide pancreatic ductal adenocarcinoma with remarkable resistance to cell stress, such as starvation or gemcitabine treatment. Regulates the circadian clock by repressing the transcriptional activator activity of the CLOCK-BMAL1 heterodimer in a CRY1/CRY2 independent manner. Increased repression of the heterodimer is seen in the presence of NFKB2/p52. Is required for both T and B lymphocyte maturation and function (PubMed:26385063).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab247279 is the carrier-free version of ab33907.

Species reactivity

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Rel B also known as RELB proto-oncogene is a member of the NF-κB family of transcription factors. This protein plays a significant role in regulating gene expression. Rel B has a molecular mass of approximately 68 kDa. It expresses in diverse tissues including lymphoid organs and epithelial cells. It generally resides in the cytoplasm and translocates to the nucleus upon activation.
Biological function summary	Rel B serves as a critical component of the alternative NF-κB signaling pathway. It often forms a complex with another NF-κB family member called p52. This complex controls the transcription of genes involved in the immune response cell survival and differentiation. Additionally Rel B contributes to the development of secondary lymphoid organs and modulation of immune responses.
Pathways	Rel B integrates into the non-canonical NF-κB signaling pathway also influencing the canonical pathway to a lesser extent. In the non-canonical pathway Rel B interacts with NIK and p100 to influence immune cell function. This involvement makes Rel B essential in processes like adaptive immunity and inflammatory responses. The protein p52 closely associates with Rel B aiding its activity in these pathways.
Associated diseases and disorders	Rel B has connections to autoimmune diseases and certain cancers. Abnormal Rel B activity can lead to chronic inflammation and contribute to conditions like rheumatoid arthritis. In cancer its deregulation associates with lymphomas where

it may interact with other NF-κB proteins like p50 and RelA affecting cell proliferation and survival. Understanding Rel B in these contexts could provide insights into therapeutic targets.

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

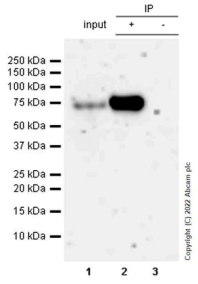
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



Immunoprecipitation - Anti-Rel B antibody [EP614Y] - BSA and Azide free (ab247279)

This data was developed using ab33907, the same antibody clone in a different buffer formulation. Rel B was immunoprecipitated from 0.35 mg of Raji (human Burkitt's lymphoma B lymphocyte), whole cell lysate with ab33907 at 1/30 dilution. Western blot was performed from the immunoprecipitate using 33907 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution. Lane 1: Raji whole cell lysate 10 µg (Input). Lane 2: ab33907 IP in Raji whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab33907 in Raji whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 180 seconds.
All lanes:
Immunoprecipitation - Anti-Rel B antibody [EP614Y] (ab33907) at 1/1000 dilution

Lane 1:
Raji whole cell lysate at 10 µg

Lane 2:
ab33907 IP in Raji whole cell lysate

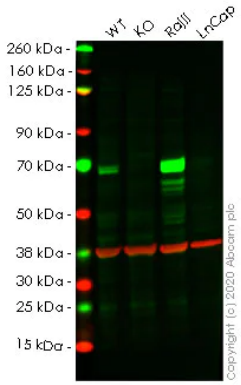
Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Predicted band size: 62 kDa

Observed band size: 62 kDa

Exposure time: 180s



Western blot - Anti-Rel B antibody [EP614Y] - BSA and Azide free (ab247279)

Rel B Western blot staining using rabbit Anti-Rel B antibody

This data was developed using the same antibody clone in a different buffer formulation (ab33907).
Lanes 1- 4: Merged signal (red and green). Green - ab33907 observed at 70 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (ab8245) observed at 37 kDa.

ab33907 was shown to react with Rel B in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line ab265948 (knockout cell lysate ab257635) was used. Wild-type HeLa and RELB knockout HeLa cell lysates were subjected to SDS-PAGE. ab33907 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at a 1 in 1000 Dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab33907)

All lanes:
Western blot - Anti-Rel B antibody [EP614Y] (ab33907) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 40 µg

Lane 2:
RELB knockout HeLa cell lysate at 40 µg

Lane 2:
Western blot - Human RELB (Rel B) knockout HeLa cell line (ab265948)

Lane 3:
Raji cell lysate at 40 µg

Lane 4:
LnCap cell lysate at 40 µg

Performed under reducing conditions.

Predicted band size: 62 kDa

Observed band size: 70 kDa

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