

## Product datasheet

# Anti-IKB beta antibody [EPR5037] ab109509

**KO VALIDATED** Recombinant RabMAb

★★★★★ 1 Abreviews 3 References 9 Images

### Overview

<b>Product name</b>	Anti-IKB beta antibody [EPR5037]
<b>Description</b>	Rabbit monoclonal [EPR5037] to IKB beta
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, IP, IHC-P, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide within Human IKB beta aa 300-400 (C terminal). The exact sequence is proprietary.
<b>Positive control</b>	WB: Jurkat, HeLa, THP-1, and MCF7 cell lysates. IP: HeLa cells. IHC-P: Human kidney tissue. ICC/IF: Jurkat cells. Flow Cyt: Jurkat cells.
<b>General notes</b>	<p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p><b>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</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™</p>

guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

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.

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.

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

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR5037
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab109509** 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/IF		1/50. <b>For unpurified use at 1/100 - 1/250.</b>
WB		1/1000 - 1/10000. Detects a band of approximately 48 kDa (predicted molecular weight: 37 kDa).
IP		1/10 - 1/100.
IHC-P		1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. See <a href="#">IHC antigen retrieval protocols</a> . <b>For unpurified use at 1/100 - 1/250.</b>
Flow Cyt		1/20.

## Target

### Function

Inhibits NF-kappa-B by complexing with and trapping it in the cytoplasm. However, the unphosphorylated form resynthesized after cell stimulation is able to bind NF-kappa-B allowing its transport to the nucleus and protecting it to further NFKBIA-dependent inactivation. Association with inhibitor kappa B-interacting NKIRAS1 and NKIRAS2 prevent its phosphorylation rendering it more resistant to degradation, explaining its slower degradation.

### Tissue specificity

Expressed in all tissues examined.

### Sequence similarities

Belongs to the NF-kappa-B inhibitor family.  
Contains 6 ANK repeats.

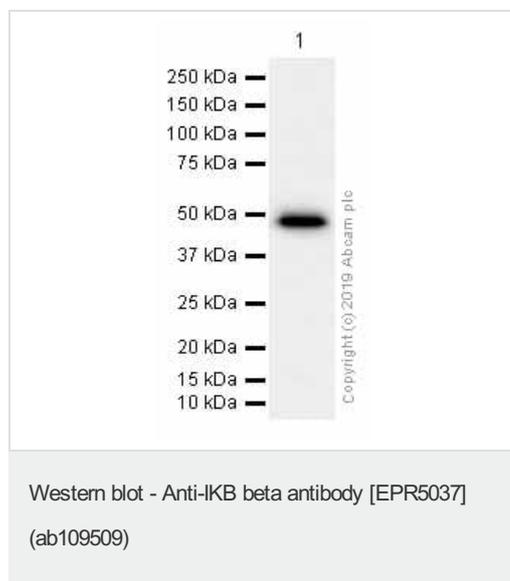
### Post-translational modifications

Phosphorylated by RPS6KA1; followed by degradation. Interaction with NKIRAS1 and NKIRAS2 probably prevents phosphorylation.

### Cellular localization

Cytoplasm. Nucleus.

## Images



Anti-IKB beta antibody [EPR5037] (ab109509) at 1/1000 dilution (Purified) + HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 15 µg

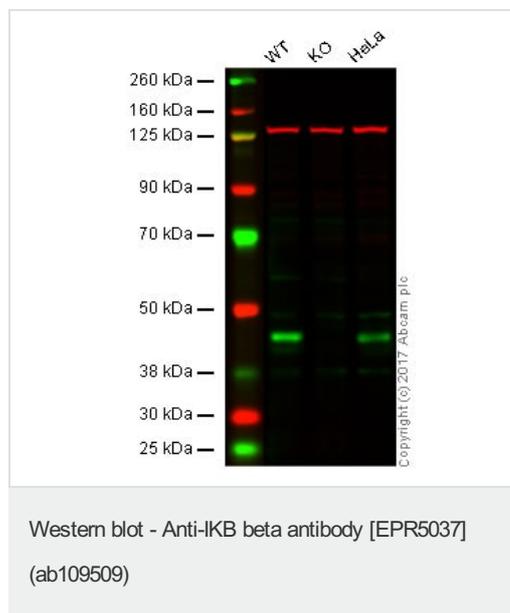
### Secondary

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 37 kDa

**Observed band size:** 48 kDa

[why is the actual band size different from the predicted?](#)



**Lane 1:** Wild type HAP1 whole cell lysate (20 µg)

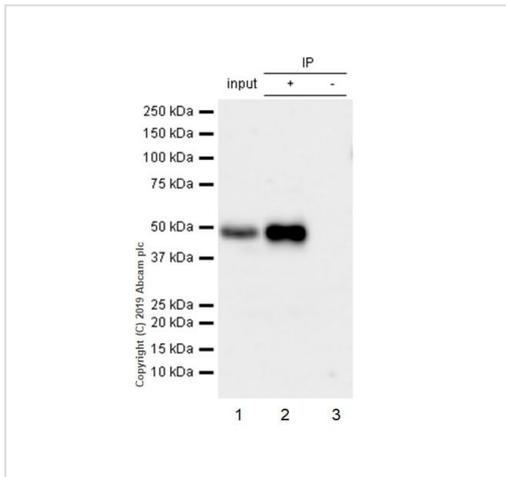
**Lane 2:** IKB beta knockout HAP1 whole cell lysate (20 µg)

**Lane 3:** HeLa whole cell lysate (20 µg)

**Lanes 1 - 3:** Merged signal (red and green). Green - unpurified ab109509 observed at 45 kDa. Red - loading control, ab18058, observed at 130 kDa.

ab109509 was shown to specifically react with IKB beta in wild type cells as signal was lost in IKB beta knockout cells. Wild-type and IKB beta knockout samples were subjected to SDS-PAGE. ab109509 and ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary

antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Immunoprecipitation - Anti-IKB beta antibody [EPR5037] (ab109509)

ab109509 (purified) at 1:20 dilution (1 µg) immunoprecipitating IKB beta in HeLa whole cell lysate.

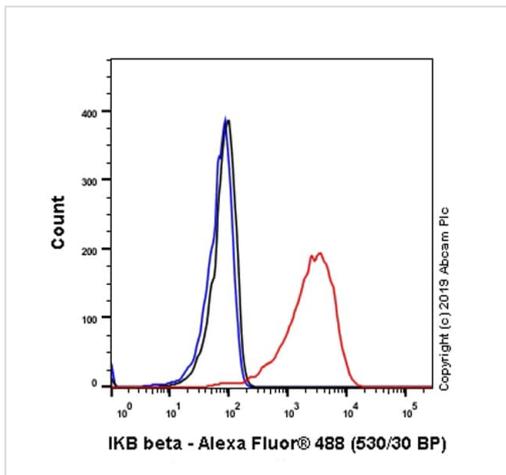
**Lane 1 (input):** HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10ug

**Lane 2 (+):** ab109509 & HeLa whole cell lysate

**Lane 3 (-):** Rabbit monoclonal IgG ([ab172730](#)) instead of ab109509 in HeLa whole cell lysate

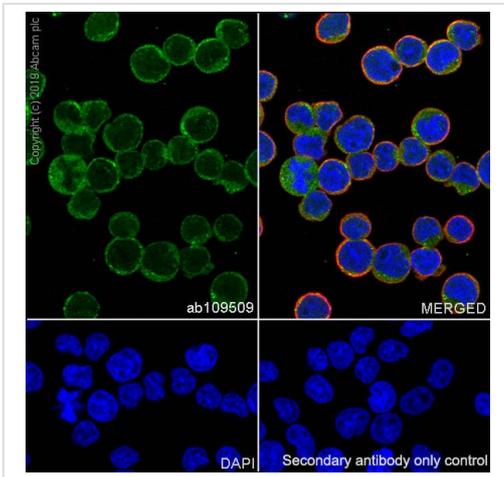
For western blotting, VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) was used at 1:1000 dilution.

**Blocking and diluting buffer:** 5% NFD/MTBST.



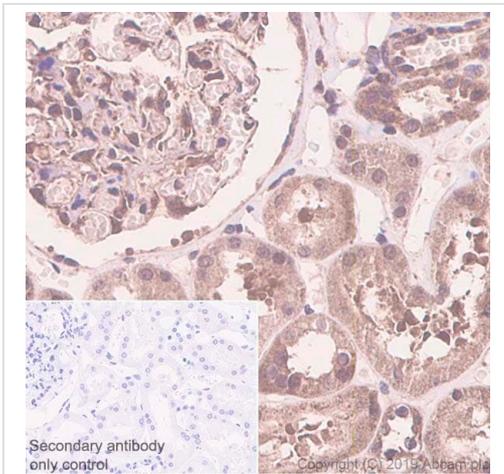
Flow Cytometry - Anti-IKB beta antibody [EPR5037] (ab109509)

Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling IKB beta with purified ab109509 at 1:20 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



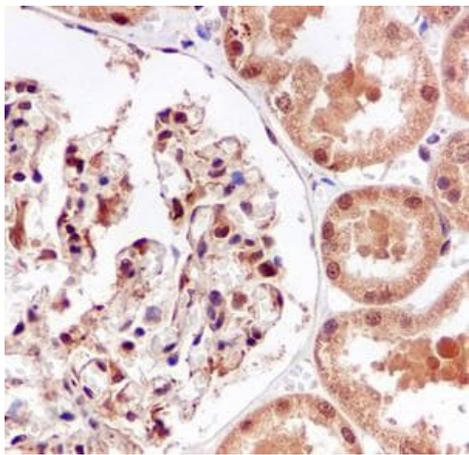
Immunocytochemistry/ Immunofluorescence - Anti-IKB beta antibody [EPR5037] (ab109509)

Immunocytochemistry/ Immunofluorescence analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling IKB beta with purified ab109509 at 1:50 dilution (2.0 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with [ab195889](#) Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IKB beta antibody [EPR5037] (ab109509)

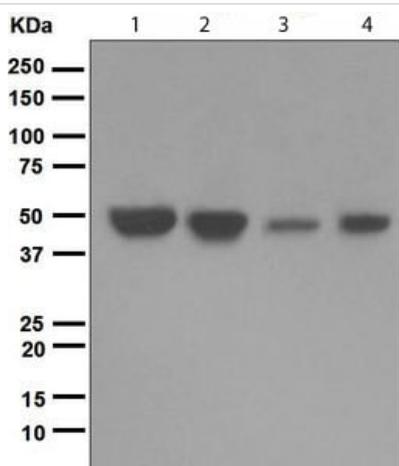
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling IKB beta with purified ab109509 at 1:500 dilution (0.20 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IKB beta antibody [EPR5037] (ab109509)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue using unpurified ab109509 at a dilution of 1/100.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-IKB beta antibody [EPR5037] (ab109509)

**All lanes :** Anti-IKB beta antibody [EPR5037] (ab109509) at 1/1000 dilution (Unpurified)

**Lane 1 :** Jurkat cell lysate

**Lane 2 :** HeLa cell lysate

**Lane 3 :** THP-1 cell lysate

**Lane 4 :** MCF7 cell lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 37 kDa

**Observed band size:** 48 kDa [why is the actual band size different from the predicted?](#)

### Why choose a recombinant antibody?

- Research with confidence**  
Consistent and reproducible results
- Long-term and scalable supply**  
Recombinant technology
- Success from the first experiment**  
Confirmed specificity
- Ethical standards compliant**  
Animal-free production

Anti-IKB beta antibody [EPR5037] (ab109509)

**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**

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- 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.

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