

Product datasheet

Anti- IKK beta antibody [EPR16628] ab178870

KO VALIDATED

Recombinant

RabMAb

★★★★★ [5 Abreviews](#) [47 References](#) [13 Images](#)

Overview

Product name	Anti- IKK beta antibody [EPR16628]
Description	Rabbit monoclonal [EPR16628] to IKK beta
Host species	Rabbit
Tested applications	Suitable for: IP, WB Unsuitable for: Flow Cyt (Intra) or ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, Daudi, HL-60, A431, 293T, C6, Raw264.7 and NIH/3T3 whole cell lysates. Human fetal kidney lysates. Mouse brain, Mouse kidney, Mouse spleen and Rat kidney lysates. IP: Jurkat whole cell extract.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR16628

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab178870 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
IP		1/40.
WB	★★★★★ (1)	1/1000. Detects a band of approximately 75, 87 kDa (predicted molecular weight: 85, 87 kDa).

Application notes

Is unsuitable for Flow Cyt (Intra) or ICC/IF.

Target

Function

Acts as part of the IKK complex in the conventional pathway of NF-kappa-B activation and phosphorylates inhibitors of NF-kappa-B thus leading to the dissociation of the inhibitor/NF-kappa-B complex and ultimately the degradation of the inhibitor. Also phosphorylates NCOA3.

Tissue specificity

Highly expressed in heart, placenta, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis and peripheral blood.

Sequence similarities

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. I-kappa-B kinase subfamily.

Contains 1 protein kinase domain.

Post-translational modifications

Upon cytokine stimulation, phosphorylated on Ser-177 and Ser-181 by MEKK1 and/or MAP3K14/NIK; which enhances activity. Once activated, autophosphorylates on the C-terminal serine cluster; which decreases activity and prevents prolonged activation of the inflammatory response.

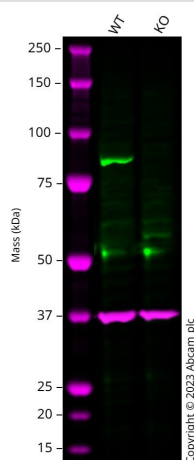
Acetylation of Thr-180 by Yersinia yopJ prevents phosphorylation and activation, thus blocking the I-kappa-B pathway.

Ubiquitinated. Monoubiquitination involves TRIM21 that leads to inhibition of Tax-induced NF-kappa-B signaling. According to PubMed:19675099, 'Ser-163' does not serve as a monoubiquitination site. According to PubMed:16267042, ubiquitination on 'Ser-163' modulates phosphorylation on C-terminal serine residues. Monoubiquitination by TRIM21 is disrupted by Yersinia yopJ.

Cellular localization

Cytoplasm. Membrane raft. Colocalized with DPP4 in membrane rafts.

Images



Western blot - Anti- IKK beta antibody [EPR16628] (ab178870)

All lanes : Anti- IKK beta antibody [EPR16628] (ab178870) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate

Lane 2 : IKKa/b knockout HeLa cell lysate

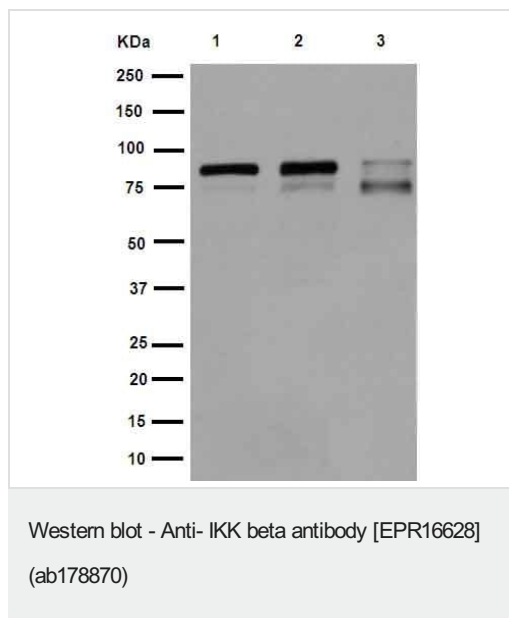
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 85, 87 kDa

Observed band size: 85 kDa

Western blot: Anti-IKKa/b antibody [EPR16628] (ab178870) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] ([ab8245](#)) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab178870 was shown to bind specifically to IKKa/b. A band was observed at 85 kDa in wild-type HeLa cell lysates with no signal observed at this size in IKKa/b knockout cell line. To generate this image, wild-type and IKKa/b knockout HeLa 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-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



All lanes : Anti- IKK beta antibody [EPR16628] (ab178870) at 1/1000 dilution

Lane 1 : HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysates

Lane 2 : Daudi (Human Burkitt's lymphoma cell line) whole cell lysates

Lane 3 : HL-60 (Human promyelocytic leukemia cells) whole cell lysates

Lysates/proteins at 20 µg per lane.

Secondary

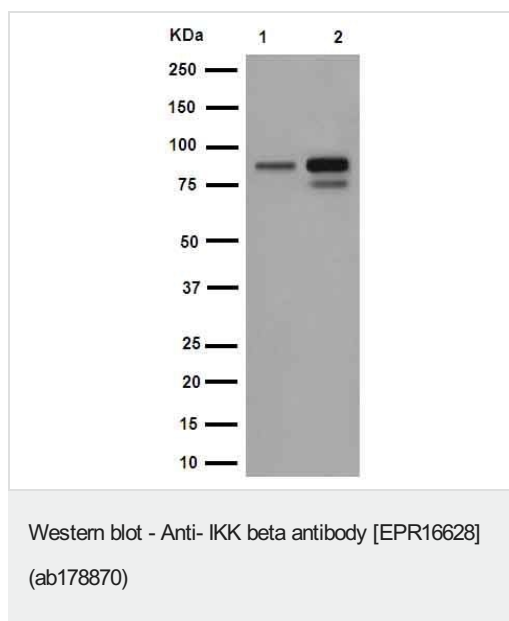
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at 1/1000 dilution

Predicted band size: 85, 87 kDa

Observed band size: 75,87 kDa

Blocking/dilution buffer: 5% NFDM/TBST.

ab178870 could recognize 3 isoforms of IKK beta with the MWs of 87kDa, 86kDa and 80kDa, respectively. It could also recognize IKK alpha.



All lanes : Anti- IKK beta antibody [EPR16628] (ab178870) at 1/1000 dilution

Lane 1 : A431 (Human epidermoid carcinoma) whole cell lysates

Lane 2 : 293T (Human epithelial cells from embryonic kidney) whole cell lysates

Lysates/proteins at 10 µg per lane.

Secondary

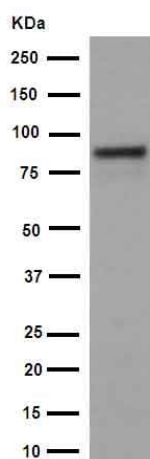
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Western blot - Anti- IKK beta antibody [EPR16628]
(ab178870)

Anti- IKK beta antibody [EPR16628] (ab178870) at 1/1000 dilution
+ Human fetal kidney lysates at 20 µg

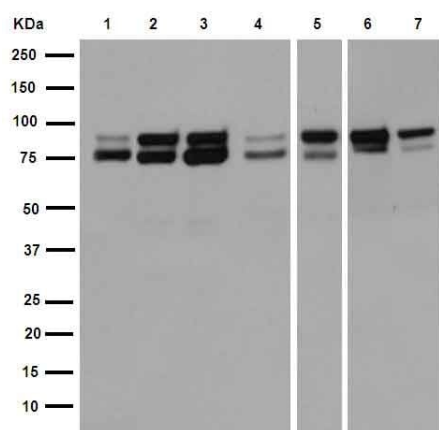
Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at
1/1000 dilution

Predicted band size: 85, 87 kDa

Observed band size: 87 kDa

Blocking/dilution buffer: 5% NFDM/TBST.



Western blot - Anti- IKK beta antibody [EPR16628]
(ab178870)

All lanes : Anti- IKK beta antibody [EPR16628] (ab178870) at
1/1000 dilution

Lane 1 : Mouse brain lysates

Lane 2 : Mouse kidney lysates

Lane 3 : Mouse spleen lysates

Lane 4 : Rat kidney lysates

Lane 5 : C6 (Rat glial tumor cells) whole cell lysates

Lane 6 : RAW 264.7 (Mouse macrophage cells transformed with
Abelson murine leukemia virus) whole cell lysates

Lane 7 : NIH/3T3 (Mouse embryo fibroblast cells) whole cell lysates

Lysates/proteins at 10 µg per lane.

Secondary

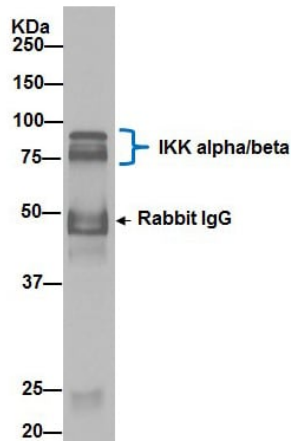
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated
antibody at 1/1000 dilution

Predicted band size: 85, 87 kDa

Observed band size: 75,87 kDa

Blocking/dilution buffer: 5% NFDM/TBST.

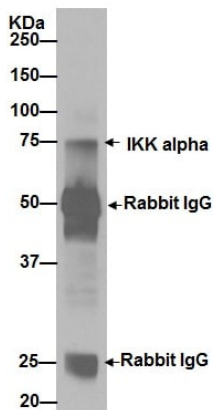
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Immunoprecipitation - Anti- IKK beta antibody
[EPR16628] (ab178870)

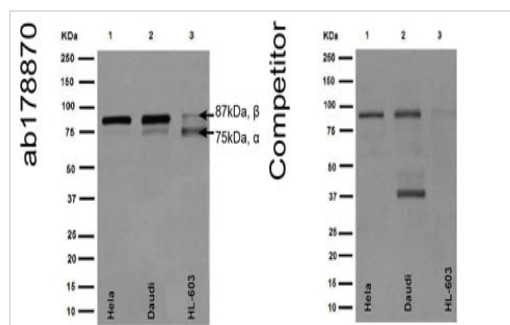
Immunoprecipitation of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell extracts using ab178870 at 1/40 dilution. Western blot detection was performed using ab178870 at 1/1000 dilution followed by Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated secondary antibody at 1/1000 dilution. The blocking and diluting buffer was 5% NFDM/TBST.

ab178870 could recognize 3 isoforms of IKK beta with the MWs of 87kDa, 86kDa and 80kDa, respectively. It could also recognize IKK alpha.



Immunoprecipitation - Anti- IKK beta antibody
[EPR16628] (ab178870)

Cross-Immunoprecipitation of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell extracts using ab178870 at 1/40 dilution. Western blot detection was performed using **ab32041** (IKK alpha) at 1/1000 dilution followed by Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated secondary antibody at 1/1000 dilution. The blocking and diluting buffer was 5% NFDM/TBST.



Western blot - Anti- IKK beta antibody [EPR16628]
(ab178870)

All lanes : Anti-IKK alpha + IKK beta [EPR16628] antibody (ab178870) at 1/1000 dilution, and a competitor's Anti-IKK alpha + IKK beta rabbit polyclonal antibody at 1/200 dilution

Lane 1 : HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysates

Lane 2 : Daudi (Human Burkitt's lymphoma cell line) whole cell lysates

Lane 3 : HL-60 (Human promyelocytic leukemia cells) whole cell lysates

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at 1/1000 dilution

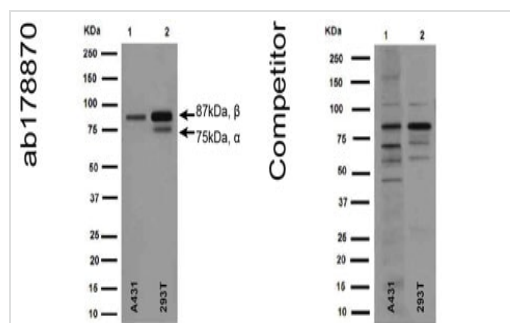
Predicted band size: 85, 87 kDa

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This western blot image is a comparison of ab178870 against a competitor's leading rabbit polyclonal antibody.

Blocking/dilution buffer: 5% NFDM/TBST.

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Lane 1 : A431 (Human epidermoid carcinoma) whole cell lysates

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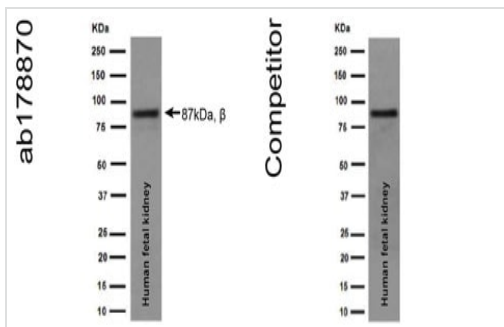
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This western blot image is a comparison between ab178870 and a competitor's leading rabbit polyclonal antibody.

Blocking/dilution buffer: 5% NFDm/TBST.

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Western blot - Anti- IKK beta antibody [EPR16628]
(ab178870)

Anti-IKK alpha + IKK beta [EPR16628] antibody (ab178870) at 1/1000 dilution, and a competitor's Anti-IKK alpha + IKK beta rabbit polyclonal antibody at 1/200 dilution + Human fetal kidney lysates

Secondary

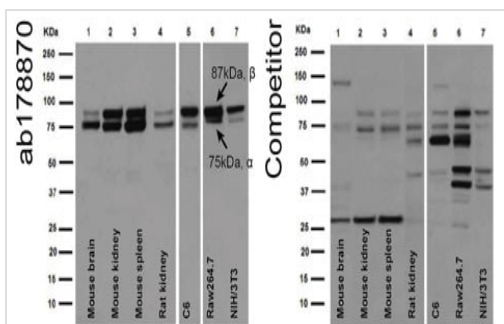
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at 1/1000 dilution

Predicted band size: 85, 87 kDa

Observed band size: 87 kDa

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Blocking/dilution buffer: 5% NFDm/TBST.



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(ab178870)

All lanes : Anti-IKK alpha + IKK beta [EPR16628] antibody (ab178870) at 1/1000 dilution, and a competitor's Anti-IKK alpha + IKK beta rabbit polyclonal antibody at 1/200 dilution

Lane 1 : Mouse brain lysates

Lane 2 : Mouse kidney lysates

Lane 3 : Mouse spleen lysates

Lane 4 : Rat kidney lysates

Lane 5 : C6 (Rat glial tumor cells) whole cell lysates

Lane 6 : RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysates

Lane 7 : NIH/3T3 (Mouse embryo fibroblast cells) whole cell lysates

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at 1/1000 dilution

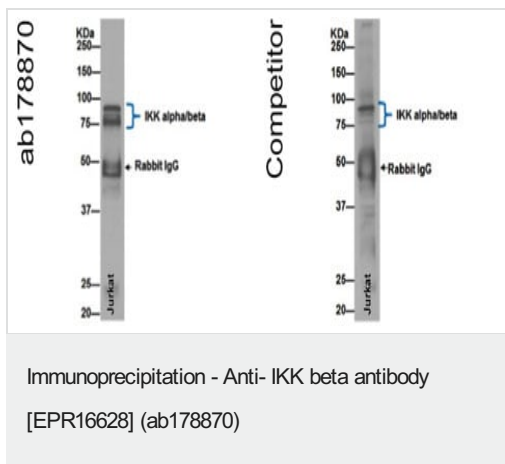
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This immunoprecipitation image is a comparison between ab178870 and a competitor's leading rabbit polyclonal antibody.

Immunoprecipitation of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell extracts using ab178870 at 1/40 dilution. Western blot detection was performed using ab178870 at 1/1000 dilution followed by Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated secondary antibody at 1/1000 dilution. The blocking and diluting buffer was 5% NFDM/TBST.

Immunoprecipitation of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell extracts using competitor's Anti-IKK alpha + IKK beta rabbit polyclonal antibody at 1/12 dilution. Western blot detection was performed using competitor antibody at 1/100 dilution followed by Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated secondary antibody at 1/100 dilution. The blocking and diluting buffer was 5% NFDM/TBST.

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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- IKK beta antibody [EPR16628] (ab178870)

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

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