abcam

Product datasheet

Anti-IKK alpha (phospho S176 + S180) antibody ab17943

1 Abreviews 8 References 2 Images

Overview

Product name	Anti-IKK alpha (phospho S176 + S180) antibody
Description	Rabbit polyclonal to IKK alpha (phospho S176 + S180)
Host species	Rabbit
Specificity	Due to sequence homology between the isoforms, this antibody may cross-react with IKKbeta that contains phosphorylated serine 176 and 180. However, we have no direct experimental evidence for this in our records.
Tested applications	**Suitable for:** ICC/IF, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse
Immunogen	Synthetic peptide corresponding to IKK alpha (phospho S176 + S180).
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. 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, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.30 Preservative: 0.05% Sodium azide Constituents: PBS, 0.1% BSA PBS is Ca2+ and Mg2+ free
Purity	Immunogen affinity purified

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab17943 in the following tested applications.

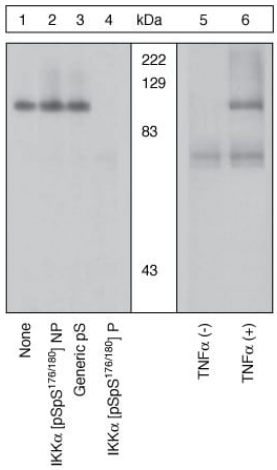
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration. PubMed: 21887257
WB	★★☆☆☆ (1)	Use at an assay dependent concentration. Predicted molecular weight: 84 kDa. When looking at the phosphorylation of endogenous proteins, we recommend that IKKalpha first be immunoprecipitated.

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. As part of the non-canonical pathway of NF-kappa-B activation, the MAP3K14-activated CHUK/IKKA homodimer phosphorylates NFKB2/p100 associated with RelB, inducing its proteolytic processing to NFKB2/p52 and the formation of NF-kappa-B RelB-p52 complexes. Also phosphorylates NCOA3. Phosphorylates 'Ser-10' of histone H3 at NF-kappa-B-regulated promoters during inflammatory responses triggered by cytokines.
Tissue specificity	Widely expressed.
Involvement in disease	Defects in CHUK are the cause of cocoon syndrome (COCOS) [MIM:613630]; also known as fetal encasement syndrome. COCOS is a lethal syndrome characterized by multiple fetal malformations including defective face and seemingly absent limbs, which are bound to the trunk and encased under the skin.
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	Phosphorylated by MAP3K14/NIK, AKT and to a lesser extent by MEKK1, and dephosphorylated by PP2A. Autophosphorylated. Acetylation of Thr-179 by Yersinia yopJ prevents phosphorylation and activation, thus blocking the I-kappa-B signaling pathway.
Cellular localization	Cytoplasm. Nucleus. Shuttles between the cytoplasm and the nucleus.

Images



Western blot - Anti-IKK alpha (phospho S176 + S180) antibody (ab17943)

All lanes : Anti-IKK alpha (phospho S176 + S180) antibody (ab17943) at 1/500 dilution

Lane 1 : Jurkat cells stimulated with 80 ng/mL TNF-alpha for 5 minutes at 37C; no peptide
Lane 2 : Jurkat cells stimulated with 80 ng/mL TNF-alpha for 5 minutes at 37C, non-phosphopeptide corresponding to the immunogen
Lane 3 : Jurkat cells stimulated with 80 ng/mL TNF-alpha for 5 minutes at 37C, a generic phosphoserine containing peptide
Lane 4 : Jurkat cells stimulated with 80 ng/mL TNF-alpha for 5 minutes at 37C, with the phosphopeptide immunogen
Lane 5 : Jurkat cells unstimulated, no peptide
Lane 6 : Jurkat cells stimulated with 80 ng/mL TNF-alpha for 5 minutes at 37C, no peptide

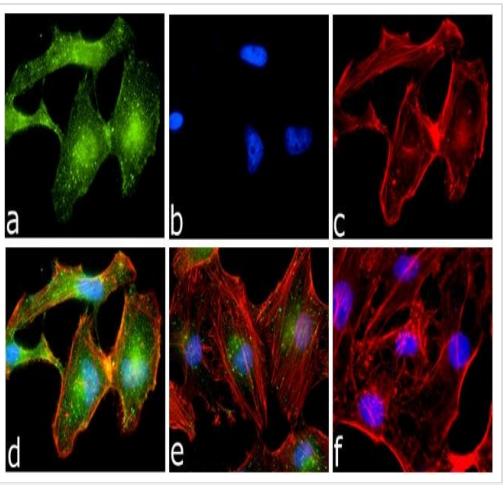
Secondary
All lanes : Goat F (ab')2 anti-rabbit IgG HRP conjugate

Predicted band size: 84 kDa

Immunoprecipitates prepared from lysates of Jurkat cells were resolved by SDS-PAGE on a 10% polyacrylamide gel and transferred to PVDF.

Membranes were either incubated with peptides (lanes 2, 3, and 4) or without peptides (lanes 1, 5 and 6) then blocked with a 5% BSA-TBST buffer overnight at 4°C and incubated with ab17943 at 1/500 dilution for two hours at room temperature in a 3% BSA-TBST buffer.

After washing, membranes were incubated with goat F (ab')2 anti-rabbit IgG HRP conjugate, and bands were detected using the Pierce SuperSignal™ method. The phospho-signal is induced by the addition of TNF-alpha.



Immunocytochemistry - Anti-IKK alpha (phospho S176 + S180) antibody (ab17943)

Immunofluorescence analysis of 70% confluent log phase 50 ng/mL TNF-Alpha treated paraformaldehyde-fixed HeLa cells permeabilized with 0.25% Triton™ X-100 for 10 minutes, blocked with 5% BSA for 1 hour at room temperature. Panel a) Green: IKK alpha (phospho S176 + S180) was labelled with ab17943 at 1/250 dilution 0.1% BSA and the secondary antibody was Goat anti-Rabbit IgG (H+L) Superclonal™ Alexa Fluor® 488 conjugate at 1/2000 dilution.The primary was incubated in for 3 hours at room temperature and the secondary: for 45 minutes at room temperature. Panel b) Blue nuclear staining with SlowFade® Gold Antifade Mountant with DAPI. Panel C) Red: F-actin staining with 1/300 dilution Rhodamine Phalloidin. Panel d) Merged. Panel e) No primary antibody control. The images were captured at 60X magnification.

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