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Datasheet for 600-401-267

IKK E phospho T501 Antibody

Overview

Description:	Anti-IKKε pT501 (RABBIT) Antibody - 600-401-267
Item No.:	600-401-267
Size:	100 µg
Applications:	ELISA, WB, IHC
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Nuclear Factor kappa B (NF-kB) is a ubiquitous transcription factor and an essential mediator of gene expression during the activation of immune and inflammatory responses. NF-kB mediates the expression of a great variety of genes in response to extracellular stimuli. NF-kB is associated with IkB proteins in the cytoplasm of the cell, which inhibit NF-kB activity. IkB proteins are phosphorylated by an IkB kinase complex consisting of at least three proteins, IKKa, IKKb, and IKKg. Isolated from a cDNA library of LPS-stimulated mouse macrophage cells, a novel molecule in the IKK complex has been recently identified and designated IKKi and/or IKKe. IKKepsilon is required for the activation of NF-kB by mitogens and T cell receptors but not by TNFα or IL-1. LPS increases the IKKe mRNA level in mouse macrophage cell lines. This protein has significant sequence homology with kinase domains of IKKa and IKKb. Overexpression of wild type IKKe in cells phosphorylates Ser32 and Ser36 of IkBa. Anti-IKKε pT501 antibody is ideal for investigators involved in NFkappaB and apoptosis research.
Synonyms:	rabbit anti-IKK epsilon pT501 antibody, rabbit anti-IKKE pT501 antibody, I kappa B kinase epsilon antibody, IKK-epsilon, IKK-E, Inducible I kappa-B kinase, IkBKE antibody, IKBKE protein antibody, Inhibitor of nuclear factor kappa B kinase subunit epsilon antibody, IKKE, IKKI
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	IKBKE

Reactivity:	Human
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	IKKe phospho peptide corresponding to a region of the human protein surrounding pT501 conjugated to KLH.
Purity/Specificity:	Anti-IKKε pT501 antibody was affinity purified from monospecific antiserum by immunoaffinity purification against the phosphopeptide and cross adsorption against the non-phosphorylated form of the peptide followed by non-adsorption against a non-specific peptide backbone to further reduce non-specific reactivity. This phospho specific polyclonal antibody is specific for phosphorylated pT501 human IKKe. Reactivity with non-phosphorylated IKKe is minimal. Cross reactivity with pT501 phosphorylated IKKe from mouse, rat or other species has not been determined.
Relevant Links:	• NCBI - Q9R0T8.1 • NCBI - Q14164.1 • UniProtKB - Q14164 • GeneID - 9641

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IHC (Based on references)
Application Note:	IKKε pT501 antibody is tested in ELISA, western blotting, and although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation. An 85 kDa band corresponding to human IKKe is detected. HeLa cells or TNF inducible KBM-5 cells can be used as a positive control. Researchers should determine optimal titers for other applications.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:25,000
WB:	1:500 - 1:3,000

Formulation

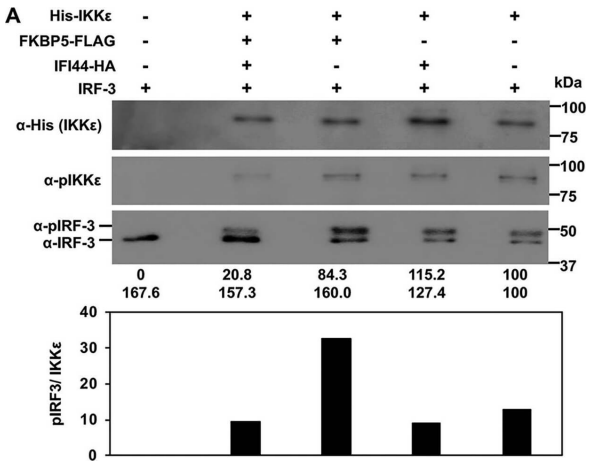
Physical State:	Liquid (sterile filtered)
Concentration:	1 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative:	0.1% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

IFI44 decreases the kinase activity of IKKβ and IKKε. Human 293T cells were silenced for IFI44, or for FKBP5, and were transfected with plasmids expressing His-IKKε (A) or MYC-IKKβ (B), together with IFI44-HA, and FKBP5-FLAG expression plasmids. At 24 hpt, IKKε (A) and IKKβ (B) complexes were purified with anti-His and anti-MYC antibodies, respectively, and these complexes were assayed in kinase assays using IRF-3 (for the IKKε complexes shown in panel A) and IkBα (for the IKKβ complexes shown in panel B) as substrates. The levels of phosphorylated and unphosphorylated forms of IRF-3 (panel A, bottom blot) and IkBα (panel B, third and fourth blots) were analyzed by Western blotting using specific antibodies. Levels of IKKε were analyzed using an anti-His-specific antibody (A, first blot) and anti-pIKKε (A, second blot), and levels of IKKβ were analyzed using an anti-MYC-specific antibody (B, first blot) and anti-pIKKβ (B, second blot). Western blots were quantified by densitometry using ImageJ software (v1.46). Protein expression levels in cells expressing IKKε (A) and IKKβ (B) alone were assigned a value of 100% for comparisons with the levels of expression in cells expressing the different combinations of IKKε/IFI44/FKBP5 (A) or IKKβ/IFI44/FKBP5 (B) (numbers are indicated below each plot). pIRF-3 and IRF-3 levels (observed in the same bottom blot in panel A) and pIkBα and IkBα (third and bottom blot in panel B) are represented with numbers below each blot. Levels of pIRF-3 and pIkBα normalized to the levels of IKKε and IKKβ are represented in the bottom graphs in panels A and B, respectively. Molecular weight markers are indicated (in kilodaltons) on the right. Figure provided by CiteAb. Source: MBio, PMID: 31455651.

References

- DeDiego ML et al. Interferon-induced protein 44 interacts with cellular FK506-binding protein 5, negatively regulates host antiviral responses, and supports virus replication. *mBio.* (2019)
- DeDiego ML et al. Novel functions of IFI44L as a feedback regulator of host antiviral responses. *J Virol.* (2019)
- Sweeney SE, Mo L, Firestein GS. Antiviral gene expression in rheumatoid arthritis: role of IKKepsilon and interferon regulatory factor 3. *Arthritis Rheum.* (2007)

Disclaimer

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