

IKK alpha Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8108a**Specification**

IKK alpha Antibody - Product Information

Application	WB,E
Primary Accession	O15111
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	84640

IKK alpha Antibody - Additional Information**Gene ID** 1147**Other Names**

Inhibitor of nuclear factor kappa-B kinase subunit alpha, I-kappa-B kinase alpha, IKK-A, IKK-alpha, Ikbka, IkappaB kinase, Conserved helix-loop-helix ubiquitous kinase, I-kappa-B kinase 1, IKK1, Nuclear factor NF-kappa-B inhibitor kinase alpha, NFKB1A, Transcription factor 16, TCF-16, CHUK, IKKA, TCF16

Target/Specificity

This IKK alpha antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide selected from the full length sequence of human IKK alpha.

Dilution

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

IKK alpha Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

IKK alpha Antibody - Protein Information**Name** CHUK**Synonyms** IKKA, TCF16

Function Serine kinase that plays an essential role in the NF-kappa-B signaling pathway which is activated by multiple stimuli such as inflammatory cytokines, bacterial or viral products, DNA damages or other cellular stresses (PubMed:[18626576](#), PubMed:[9244310](#), PubMed:[9252186](#), PubMed:[9346484](#)). Acts as a part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation and phosphorylates inhibitors of NF-kappa-B on serine residues (PubMed:[18626576](#), PubMed:[35952808](#), PubMed:[9244310](#), PubMed:[9252186](#), PubMed:[9346484](#)). These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome (PubMed:[18626576](#), PubMed:[9244310](#), PubMed:[9252186](#), PubMed:[9346484](#)). In turn, free NF-kappa-B is translocated into the nucleus and activates the transcription of hundreds of genes involved in immune response, growth control, or protection against apoptosis (PubMed:[18626576](#), PubMed:[9244310](#), PubMed:[9252186](#), PubMed:[9346484](#)). Negatively regulates the pathway by phosphorylating the scaffold protein TAXBP1 and thus promoting the assembly of the A20/TNFAIP3 ubiquitin-editing complex (composed of A20/TNFAIP3, TAX1BP1, and the E3 ligases ITCH and RNF11) (PubMed:[21765415](#)). Therefore, CHUK plays a key role in the negative feedback of NF-kappa-B canonical signaling to limit inflammatory gene activation. 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 (PubMed:[20501937](#)). In turn, these complexes regulate genes encoding molecules involved in B-cell survival and lymphoid organogenesis. Also participates in the negative feedback of the non-canonical NF-kappa-B signaling pathway by phosphorylating and destabilizing MAP3K14/NIK. Within the nucleus, phosphorylates CREBBP and consequently increases both its transcriptional and histone acetyltransferase activities (PubMed:[17434128](#)). Modulates chromatin accessibility at NF-kappa-B-responsive promoters by phosphorylating histones H3 at 'Ser-10' that are subsequently acetylated at 'Lys-14' by CREBBP (PubMed:[12789342](#)). Additionally, phosphorylates the CREBBP-interacting protein NCOA3. Also phosphorylates FOXO3 and may regulate this pro-apoptotic transcription factor (PubMed:[15084260](#)). Phosphorylates RIPK1 at 'Ser-25' which represses its kinase activity and consequently prevents TNF-mediated RIPK1-dependent cell death (By similarity). Phosphorylates AMBRA1 following mitophagy induction, promoting AMBRA1 interaction with ATG8 family proteins and its mitophagic activity (PubMed:[30217973](#)).

Cellular Location

Cytoplasm. Nucleus Note=Shuttles between the cytoplasm and the nucleus

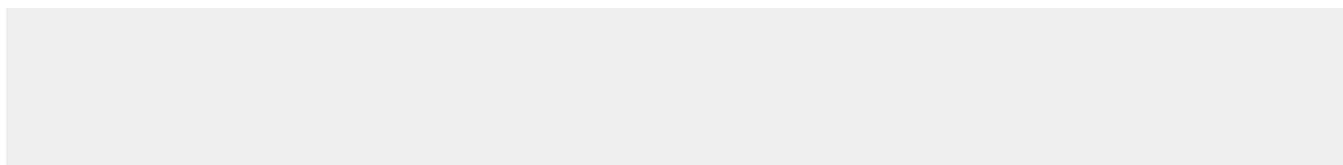
Tissue Location

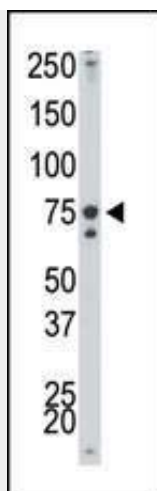
Widely expressed.

IKK alpha Antibody - Protocols

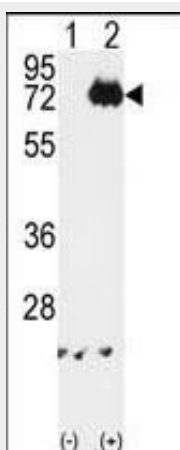
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

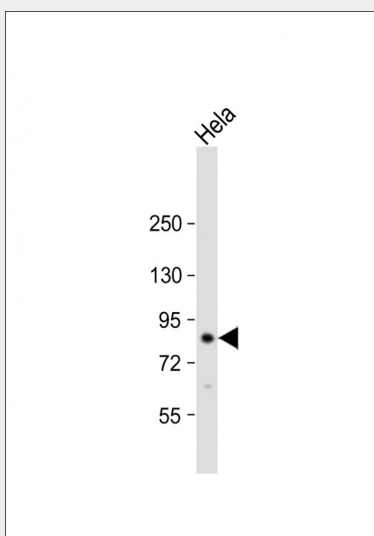
IKK alpha Antibody - Images



The anti-IKK alpha Pab (Cat. #AP8108a) is used in Western blot to detect IKK alpha in mouse spleen tissue lysate.



Western blot analysis of IKK alpha (arrow) using rabbit polyclonal IKK alpha Antibody (Cat.#AP8108a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the IKK alpha gene (Lane 2) (Origene Technologies).



Anti-IKK alpha Antibody at 1:1000 dilution + HeLa whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted

band size : 85 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

IKK alpha Antibody - Background

This gene encodes a member of the serine/threonine protein kinase family. The encoded protein, a component of a cytokine-activated protein complex that is an inhibitor of the essential transcription factor NF-kappa-B complex, phosphorylates sites that trigger the degradation of the inhibitor via the ubiquination pathway, thereby activating the transcription factor.

IKK alpha Antibody - References

- Yamamoto, Y., et al., Nature 423(6940):655-659 (2003).
Charalambous, M.P., et al., Br. J. Cancer 88(10):1598-1604 (2003).
Takaesu, G., et al., J. Mol. Biol. 326(1):105-115 (2003).
Albanese, C., et al., Mol. Biol. Cell 14(2):585-599 (2003).
Munzert, G., et al., Blood 100(10):3749-3756 (2002).