

Anti-IKK Alpha Antibody
Catalog # ABO10928**Specification**

Anti-IKK Alpha Antibody - Product Information

Application	WB
Primary Accession	O15111
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Inhibitor of nuclear factor kappa-B kinase subunit alpha(CHUK) detection. Tested with WB in Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-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, 2.7.11.10, Conserved helix-loop-helix ubiquitous kinase, I-kappa-B kinase 1, IKK1, Nuclear factor NF-kappa-B inhibitor kinase alpha, NFKBIKA, Transcription factor 16, TCF-16, CHUK, IKKA, TCF16

Calculated MW

84640 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

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

Tissue Specificity

Widely expressed.

Protein Name

Inhibitor of nuclear factor kappa-B kinase subunit alpha(I-kappa-B kinase alpha/IKK-A/IKK-alpha/IkbKA/IkappaB kinase)

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human IKK alpha(728-745aa

NEEQGNSMMNLDWSWLTE).

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

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

Anti-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](http://www.uniprot.org/citations/18626576), PubMed: [9244310](http://www.uniprot.org/citations/9244310), PubMed: [9252186](http://www.uniprot.org/citations/9252186), PubMed: [9346484](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/18626576), PubMed: [35952808](http://www.uniprot.org/citations/35952808), PubMed: [9244310](http://www.uniprot.org/citations/9244310), PubMed: [9252186](http://www.uniprot.org/citations/9252186), PubMed: [9346484](http://www.uniprot.org/citations/9346484)). These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome (PubMed: [18626576](http://www.uniprot.org/citations/18626576), PubMed: [9244310](http://www.uniprot.org/citations/9244310), PubMed: [9252186](http://www.uniprot.org/citations/9252186), PubMed: [9346484](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/18626576), PubMed: [9244310](http://www.uniprot.org/citations/9244310), PubMed: [9252186](http://www.uniprot.org/citations/9252186), PubMed: [9346484](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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 NF- κ B2/p52 and the formation of NF- κ 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- κ 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- κ 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

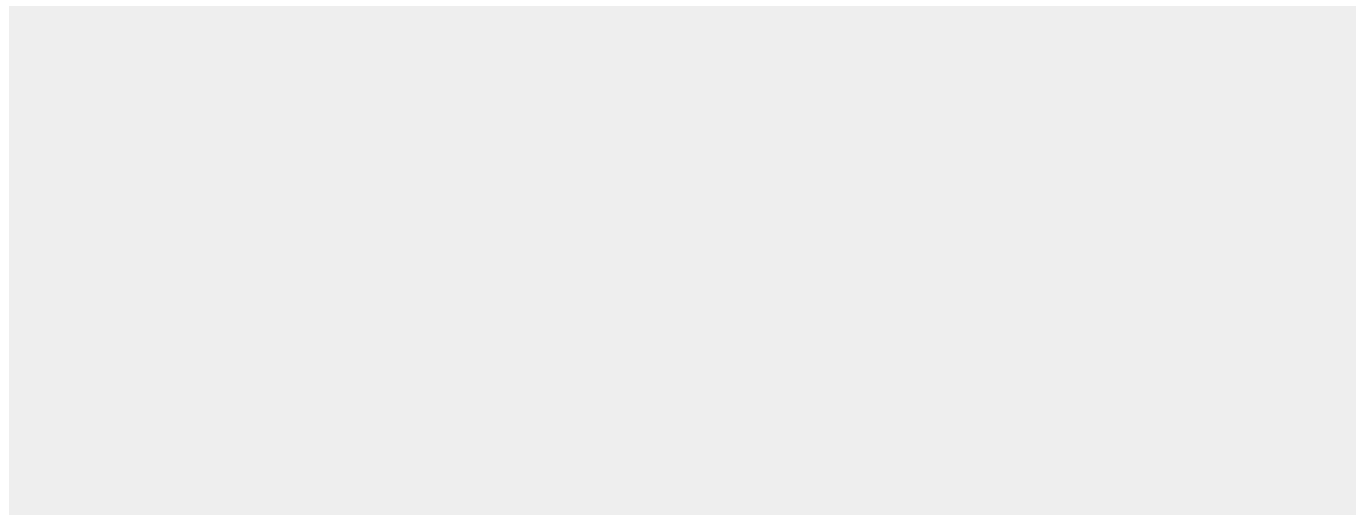
Tissue Location

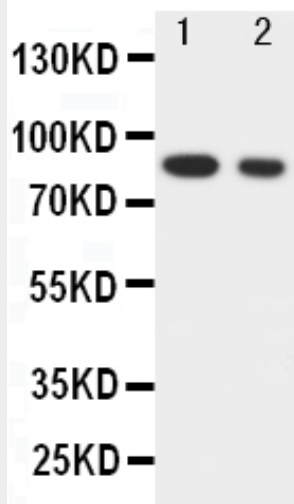
Widely expressed.

Anti-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](#)

Anti-IKK Alpha Antibody - Images



Anti-IKK alpha antibody, ABO10928, Western blotting Lane 1: HELA Cell Lysate Lane 2: JURKAT Cell Lysate

Anti-IKK Alpha Antibody - Background

IKBKA (INHIBITOR OF KAPPA LIGHT POLYPEPTIDE GENE ENHANCER IN B CELLS, KINASE OF, ALPHA), also called CHUK, NFKBIKA, IKKA, IKK1, I-KAPPA-B, is a protein kinase that in humans is encoded by the CHUK gene. And it is a member of the protein kinase superfamily. And the protein contains a serine/threonine kinase domain, due to its ubiquitous expression in a broad array of tissues and high degree of conservation across species. By FISH, the IKBKA gene is mapped to chromosome 10q24. Phosphorylation of serine residues on the I-kappa-B proteins by kinases (IKBKA or IKBKB) marks them for destruction via the ubiquitination pathway, thereby allowing activation of the NF-kappa-B complex. IKK-alpha is part of the I kappa B kinase complex that plays an important role in regulating the NF-kappa B transcription factor.