

CHUK Antibody(C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP19658b

Product Information

Application	WB, E
Primary Accession	O15111
Other Accession	Q95KV1 , NP_001269.3
Reactivity	Human
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41164
Calculated MW	84640
Antigen Region	553-582

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, NFKB1KA, Transcription factor 16, TCF-16, CHUK, IKKA, TCF16
Target/Specificity	This CHUK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 553-582 amino acids from the C-terminal region of human CHUK.
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 purified through a protein A column, followed by peptide affinity purification.
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	CHUK Antibody(C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHUK
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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.

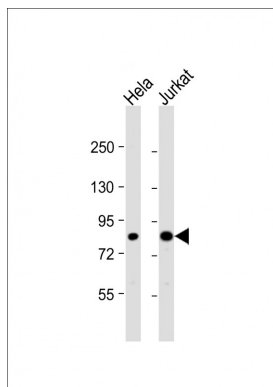
Background

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 ubiquitination pathway, thereby activating the transcription factor.

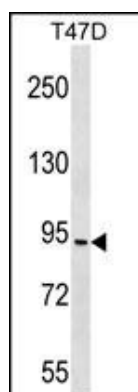
References

- Lahtela, J., et al. N. Engl. J. Med. 363(17):1631-1637(2010)
Gouin, E., et al. Proc. Natl. Acad. Sci. U.S.A. 107(40):17333-17338(2010)
Cummins, E.P., et al. J. Immunol. 185(7):4439-4445(2010)

Images



All lanes : Anti-CHUK Antibody (C-term) at 1:1000 dilution
Lane 1: HeLa whole cell lysate Lane 2: Jurkat 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.



CHUK Antibody (C-term) (Cat. #AP19658b) western blot analysis in T47D cell line lysates (35ug/lane). This demonstrates the CHUK antibody detected the CHUK protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.