Rabbit IKK-alpha/beta Polyclonal Antibody | anti-CHUK antibody

IKK-alpha/beta Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA322136	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

IKK-alpha/beta; Polyclonal Antibody; IKK-alpha/beta Antibody; chuk; CHUK1; Conserved Helix Loop Helix Ubiquitous Kinase; Conserved helix loop ubiquitous kinase; Conserved helix-loop-helix ubiquitous kinase; I Kappa B Kinase 1; I Kappa B Kinase Alpha; I-kappa-B kinase 1; I-kappa-B kinase alpha; IkappaB kinase; IkB kinase alpha subunit; IkBKA; IKK 1; IKK A; IKK a kinase; IKK-A; IKK-alpha; IKK1; IKKA; IKKA_HUMAN; Inhibitor Of Kappa Light Polypeptide Gene Enhancer In B Cells; Inhibitor Of Nuclear Factor Kappa B Kinase Alpha Subunit; Inhibitor of nuclear factor kappa-B kinase subunit alpha; NFKBIKA; Nuclear Factor Kappa B Inhibitor Kinase Alpha; Nuclear factor NF kappa B inhibitor kinase alpha; Nuclear factor NF-kappa-B inhibitor kinase alpha; Nuclear factor NFkappaB inhibitor kinase alpha; Nuclear Factor Of Kappa Light Chain Gene Enhancer In B Cells Inhibitor; TCF-16; TCF16; Transcription factor 16; I kappa B kinase 2; I kappa B kinase beta; I-kappa-B kinase 2; I-kappa-B-kinase beta; IkBKB; IKK beta; IKK-B; IKK-beta; IKK2; IKKB; IKKB_HUMAN; IMD15; Inhibitor of kappa light polypeptide gene enhancer in B cells; kinase beta; Inhibitor of nuclear factor kappa-B kinase subunit beta; NFKBIKB; Nuclear factor NF-kappa-B inhibitor kinase beta; anti-CHUK antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	IKK-alpha/beta antibody detects endogenous levels of total IKK-alpha/beta
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	745
Applicable Applications for anti-CHUK antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human IKK-alpha/beta
Subcellular Location	Cytoplasm. Nucleus. Shuttles between the cytoplasm and the nucleus.
Tissue Specificity	Widely expressed.
Predicted Cross Reactivity	**Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus**
Similarity	Pig (100%), Zebrafish (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemisry)
AAA322136 at 1/100 staining Human gastric tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IF (Immunofluorescence)
AAA322136 staining HepG2 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of IKK-alpha/beta expression in HepG2 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-CHUK antibody	Description: IKK-beta a kinase of the IKK family. 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. Preferentially found as a heterodimer with IKK-alpha but also as an homodimer. 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. Acts as 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. These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome. 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. 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). 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. In turn, these complexes regulate genes encoding molecules involved in B-cell survival and lymphoid organogenesis. Participates also 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. 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. Additionally, phosphorylates the CREBBP-interacting protein NCOA3. Also phosphorylates FOXO3 and may regulate this pro-apoptotic transcription factor (PubMed:15084260). Subunit Structure: Component of the I-kappa-B-kinase (IKK) core complex consisting of CHUK, IKBKB and IKBKG; probably four alpha/CHUK-beta/IKBKB dimers are associated with four gamma/IKBKG subunits. The IKK core complex seems to associate with regulatory or adapter proteins to form a IKK-signalosome holo-complex (PubMed:10195894, PubMed:12612076). The IKK complex associates with TERF2IP/RAP1, leading to promote IKK-mediated phosphorylation of RELA/p65 (By similarity). Part of a complex composed of NCOA2, NCOA3, CHUK/IKKA, IKBKB, IKBKG and CREBBP (PubMed:11971985). Part of a 70-90 kDa complex at least consisting of CHUK/IKKA, IKBKB, NFKBIA, RELA, ELP1 and MAP3K14 (PubMed:9751059). Directly interacts with TRPC4AP (By similarity). May interact with TRAF2 (PubMed:19150425). Interacts with NALP2 (PubMed:15456791). May interact with MAVS/IPS1 (PubMed:16177806). Interacts with ARRB1 and ARRB2 (PubMed:15173580). Interacts with NLRC5; prevents CHUK phosphorylation and kinase activity (PubMed:20434986). Interacts with PIAS1; this interaction induces PIAS1 phosphorylation (PubMed:17540171). Interacts with ZNF268 isoform 2; the interaction is further increased in a TNF-alpha-dependent manner (PubMed:23091055). Interacts with FOXO3 (PubMed:15084260). Interacts with IFIT5; the interaction synergizes the recruitment of IKK to MAP3K7 and enhances IKK phosphorylation (PubMed:26334375). Interacts with LRRC14 (PubMed:27426725). Post-translational Modifications: Phosphorylated by MAP3K14/NIK, AKT and to a lesser extent by MEKK1, and dephosphorylated by PP2A. Autophosphorylated. (Microbial infection) Acetylation of Thr-179 by Yersinia yopJ prevents phosphorylation and activation, thus blocking the I-kappa-B signaling pathway. Similarity: The kinase domain is located in the N-terminal region. The leucine zipper is important to allow homo-and hetero-dimerization. At the C-terminal region is located the region responsible for the interaction with NEMO/IKBKG. Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. I-kappa-B kinase subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	62241001
NCBI GeneID	1147
NCBI Accession #	NP_001269.3
NCBI GenBank Nucleotide #	NM_001278.4
UniProt Accession #	O15111; O14666; Q13132; Q5W0I4; Q92467
Molecular Weight	Observed: 85 kDa Predicted: 85 kDa
NCBI Official Full Name	inhibitor of nuclear factor kappa-B kinase subunit alpha isoform 1
NCBI Official Synonym Full Names	conserved helix-loop-helix ubiquitous kinase
NCBI Official Symbol	CHUK

NCBI Official Synonym Symbols	IKK1; IKKA; IKBKA; TCF16; NFKBIKA; IKK-alpha
NCBI Protein Information	inhibitor of nuclear factor kappa-B kinase subunit alpha
UniProt Protein Name	Inhibitor of nuclear factor kappa-B kinase subunit alpha
UniProt Gene Name	**CHUK**
UniProt Synonym Gene Names	IKKA; TCF16; I-kappa-B kinase alpha; IKK-A; IKK-alpha; IkBKA; IkappaB kinase; IKK1; NFKBIKA; TCF-16

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
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