

Anti-IKK alpha CHUK Rabbit Monoclonal Antibody
Catalog # ABO13982**Specification****Anti-IKK alpha CHUK Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	O15111
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-IKK alpha CHUK Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-IKK alpha CHUK Rabbit Monoclonal 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, IKK-1, IKK1, Nuclear factor NF-kappa-B inhibitor kinase alpha, NFKB1A, Transcription factor 16, TCF-16, CHUK, IKKA, TCF16

Calculated MW

84640 MW KDa

Application Details

WB 1:5000-1:20000
IHC 1:50-1:200
ICC/IF 1:50-1:200
IP 1:50
FC 1:50

Subcellular Localization

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

Tissue Specificity

Widely expressed.

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human IKK alpha

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term

storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-IKK alpha CHUK Rabbit Monoclonal 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

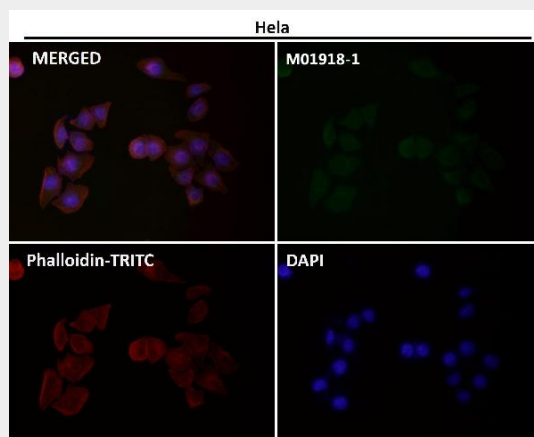
Tissue Location

Widely expressed.

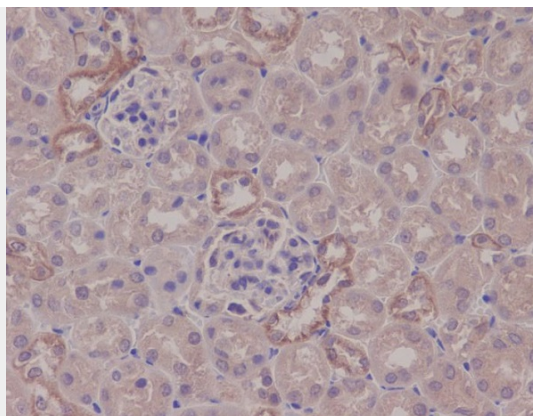
Anti-IKK alpha CHUK Rabbit Monoclonal Antibody - Protocols

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 CHUK Rabbit Monoclonal Antibody - Images

Immunofluorescent analysis using the Antibody at 1:50 dilution.



Immunohistochemical analysis of paraffin-embedded mouse kidney, using IKK alpha Antibody.

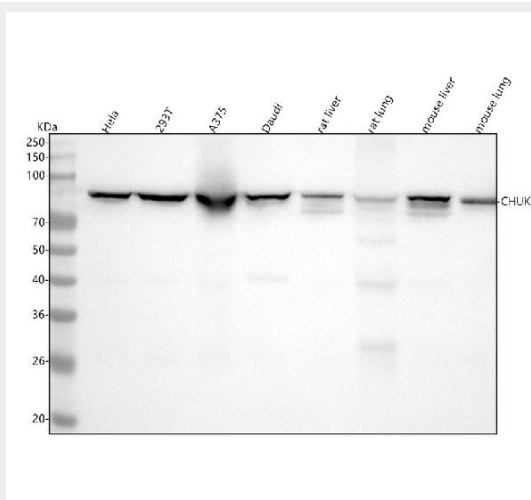


Figure 1. Western blot analysis of IKK alpha using anti-IKK alpha antibody (M01918-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

- Lane 1: human Hela whole cell lysates,
- Lane 2: human 293T whole cell lysates,
- Lane 3: human A375 whole cell lysates,
- Lane 4: human Daudi whole cell lysates,
- Lane 5: rat liver tissue lysates,
- Lane 6: rat lung tissue lysates,
- Lane 7: mouse liver tissue lysates,
- Lane 8: mouse lung tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-IKK alpha antigen affinity purified monoclonal antibody (Catalog # M01918-1) at 1:5000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for IKK alpha at approximately 85 kDa. The expected band size for IKK alpha is at 85 kDa.