

Mouse Chuk Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14612b

Specification

Mouse Chuk Antibody (C-term) - Product Information

| | |
|-------------------|------------------------|
| Application | WB, IHC-P,E |
| Primary Accession | Q60680 |
| Reactivity | Mouse |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Calculated MW | 84729 |
| Antigen Region | 551-578 |

Mouse Chuk Antibody (C-term) - Additional Information

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, Chuk, Ikka

Target/Specificity

This Mouse Chuk antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 551-578 amino acids from the C-terminal region of mouse Chuk.

Dilution

WB~~1:1000
IHC-P~~1:10~50

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

Mouse Chuk Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Chuk Antibody (C-term) - Protein Information

Name Chuk

Synonyms Ikka

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 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. 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 (PubMed:[12789342](#)). Additionally, phosphorylates the CREBBP-interacting protein NCOA3. Also phosphorylates FOXO3 and may regulate this pro- apoptotic transcription factor. Phosphorylates RIPK1 at 'Ser-25' which represses its kinase activity and consequently prevents TNF-mediated RIPK1-dependent cell death (PubMed:[30988283](#)). Phosphorylates AMBRA1 following mitophagy induction, promoting AMBRA1 interaction with ATG8 family proteins and its mitophagic activity (By similarity).

Cellular Location

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

Tissue Location

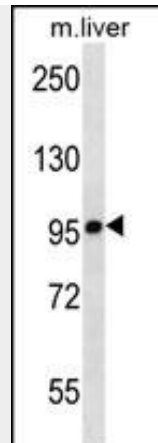
Ubiquitous only for isoform 1, isoforms 2 and 3 are expressed predominantly in brain and T-lymphocytes

Mouse Chuk Antibody (C-term) - Protocols

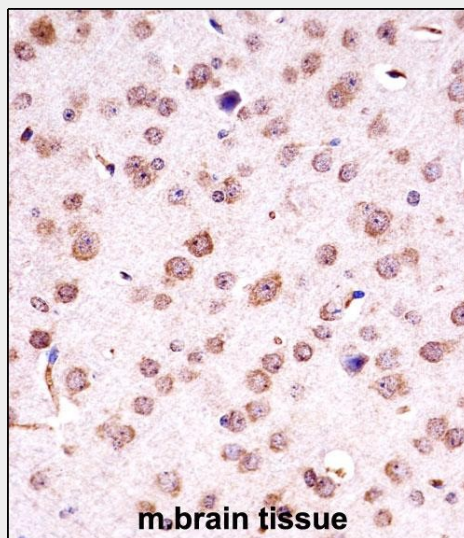
Provided below are standard protocols that you may find useful for product applications.

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

Mouse Chuk Antibody (C-term) - Images



Mouse Chuk Antibody (C-term) (Cat. #AP14612b) western blot analysis in mouse liver tissue lysates (35ug/lane). This demonstrates the Chuk antibody detected the Chuk protein (arrow).



Mouse Chuk Antibody (C-term) (AP14612b) immunohistochemistry analysis in formalin fixed and paraffin embedded mouse brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of Mouse Chuk Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Mouse Chuk Antibody (C-term) - Background

Chuk acts as part of the IKK complex in the conventional pathway of NF-kappa-B activation and 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. 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. Also phosphorylates NCOA3. Phosphorylates 'Ser-10' of histone H3 at NF-kappa-B-regulated promoters during inflammatory responses triggered by cytokines.