

# CSNK1A1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7400a

## Product Information

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<b>Application</b>	IHC-P, WB, E
<b>Primary Accession</b>	<a href="#">P48729</a>
<b>Other Accession</b>	<a href="#">P67963</a> , <a href="#">P67962</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Chicken, Xenopus
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB00886
<b>Calculated MW</b>	38915
<b>Antigen Region</b>	309-337

## Additional Information

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<b>Gene ID</b>	1452
<b>Other Names</b>	Casein kinase I isoform alpha, CKI-alpha, CK1, CSNK1A1
<b>Target/Specificity</b>	This CSNK1A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 309-337 amino acids from the C-terminal region of human CSNK1A1.
<b>Dilution</b>	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
<b>Storage</b>	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.
<b>Precautions</b>	CSNK1A1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CSNK1A1
<b>Function</b>	Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates (PubMed: <a href="#">11955436</a> , PubMed: <a href="#">1409656</a> , PubMed: <a href="#">18305108</a> , PubMed: <a href="#">23902688</a> ). It can

phosphorylate a large number of proteins (PubMed:[11955436](#), PubMed:[1409656](#), PubMed:[18305108](#), PubMed:[23902688](#)). Participates in Wnt signaling (PubMed:[11955436](#)). Phosphorylates CTNNB1 at 'Ser-45' (PubMed:[11955436](#)). May phosphorylate PER1 and PER2 (By similarity). May play a role in segregating chromosomes during mitosis (PubMed:[1409656](#)). May play a role in keratin cytoskeleton disassembly and thereby, it may regulate epithelial cell migration (PubMed:[23902688](#)). Acts as a positive regulator of mTORC1 and mTORC2 signaling in response to nutrients by mediating phosphorylation of DEPTOR inhibitor (PubMed:[22017875](#), PubMed:[22017877](#)). Acts as an inhibitor of NLRP3 inflammasome assembly by mediating phosphorylation of NLRP3 (By similarity).

### Cellular Location

Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Chromosome, centromere, kinetochore. Nucleus speckle. Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q8BK63}. Cytoplasm, cytoskeleton, spindle {ECO:0000250|UniProtKB:Q8BK63}. Note=Localizes to the centrosome in interphase cells, and to kinetochore fibers during mitosis. Also recruited to the keratin cytoskeleton (PubMed:23902688)

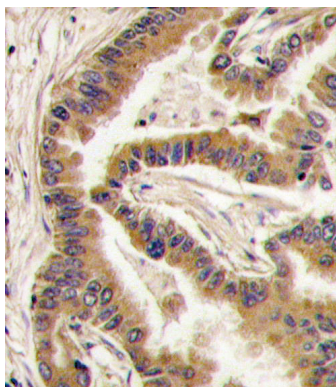
## Background

Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates. CK1a can phosphorylate a large number of proteins. This cytoplasmic protein participates in Wnt signaling. It has been demonstrated to phosphorylate CTNNB1 on Ser-45 and to interact with the Axin complex.

## References

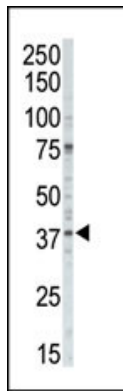
Liu, C., et al., Cell 108(6):837-847 (2002).  
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).  
Fish, K.J., et al., J. Biol. Chem. 270(25):14875-14883 (1995).  
Tapia, C., et al., FEBS Lett. 349(2):307-312 (1994).

## Images



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with CK1a antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Western blot analysis of anti-CK1a Pab (Cat. #AP7400a) in A375 cell lysate. CK1a (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



## Citations

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- [Casein kinase I epsilon interacts with mitochondrial proteins for the growth and survival of human ovarian cancer cells.](#)

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