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CSNK1A1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7400a

Product Information

Application	IHC-P, WB, E
Primary Accession	P48729
Other Accession	P67963, P67962
Reactivity	Human
Predicted	Chicken, Xenopus, Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB00886
Calculated MW	38915
Antigen Region	309-337

Additional Information

Gene ID	1452
Other Names	Casein kinase I isoform alpha, CKI-alpha, CK1, CSNK1A1
Target/Specificity	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.
Dilution	IHC-P~~1:100~500 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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	CSNK1A1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CSNK1A1
Function	Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates (PubMed:11955436, PubMed:1409656, PubMed:18305108, PubMed:23902688). Phosphorylates 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)

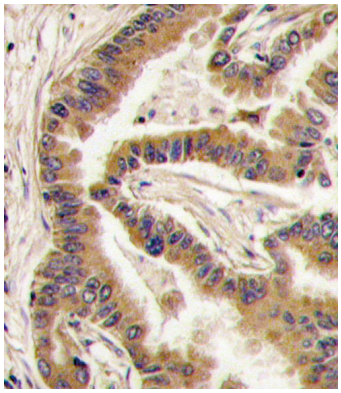
Background

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

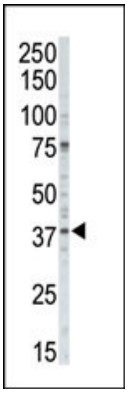
Liu, C., et al., Cell 108(6):837-847 (2002).
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Fish, K.J., et al., J. Biol. Chem. 270(25):14875-14883 (1995).
Tapia, C., et al., FEBS Lett. 349(2):307-312 (1994).

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

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

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