

**Anti-CSNK1A1 Picoband Antibody**  
**Catalog # ABO12379****Specification**

---

**Anti-CSNK1A1 Picoband Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P48729</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Casein kinase I isoform alpha(CSNK1A1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-CSNK1A1 Picoband Antibody - Additional Information**

**Gene ID** 1452

**Other Names**

Casein kinase I isoform alpha, CKI-alpha, 2.7.11.1, CK1, CSNK1A1

**Calculated MW**

38915 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat  
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

**Subcellular Localization**

Cytoplasm . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Chromosome, centromere, kinetochore . Nucleus speckle . Localizes to the centrosome in interphase cells, and to kinetochore fibers during mitosis. Also recruited to the keratin cytoskeleton (PubMed:23902688). .

**Protein Name**

Casein kinase I isoform alpha

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human CSNK1A1 (30-68aa DIYLAINITNGEEVAVKLESQKARHPQLLYESKLYKILQ), identical to the related mouse and rat sequences.

**Purification**

Immunogen affinity purified.

#### Cross Reactivity

No cross reactivity with other proteins

#### Storage

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

### Anti-CSNK1A1 Picoband Antibody - Protein Information

#### Name CSNK1A1

#### Function

Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates (PubMed:<a href="http://www.uniprot.org/citations/11955436" target="\_blank">11955436</a>, PubMed:<a href="http://www.uniprot.org/citations/1409656" target="\_blank">1409656</a>, PubMed:<a href="http://www.uniprot.org/citations/18305108" target="\_blank">18305108</a>, PubMed:<a href="http://www.uniprot.org/citations/23902688" target="\_blank">23902688</a>). It can phosphorylate a large number of proteins (PubMed:<a href="http://www.uniprot.org/citations/11955436" target="\_blank">11955436</a>, PubMed:<a href="http://www.uniprot.org/citations/1409656" target="\_blank">1409656</a>, PubMed:<a href="http://www.uniprot.org/citations/18305108" target="\_blank">18305108</a>, PubMed:<a href="http://www.uniprot.org/citations/23902688" target="\_blank">23902688</a>). Participates in Wnt signaling (PubMed:<a href="http://www.uniprot.org/citations/11955436" target="\_blank">11955436</a>). Phosphorylates CTNNB1 at 'Ser-45' (PubMed:<a href="http://www.uniprot.org/citations/11955436" target="\_blank">11955436</a>). May phosphorylate PER1 and PER2 (By similarity). May play a role in segregating chromosomes during mitosis (PubMed:<a href="http://www.uniprot.org/citations/1409656" target="\_blank">1409656</a>). May play a role in keratin cytoskeleton disassembly and thereby, it may regulate epithelial cell migration (PubMed:<a href="http://www.uniprot.org/citations/23902688" target="\_blank">23902688</a>). Acts as a positive regulator of mTORC1 and mTORC2 signaling in response to nutrients by mediating phosphorylation of DEPTOR inhibitor (PubMed:<a href="http://www.uniprot.org/citations/22017875" target="\_blank">22017875</a>, PubMed:<a href="http://www.uniprot.org/citations/22017877" target="\_blank">22017877</a>). 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)

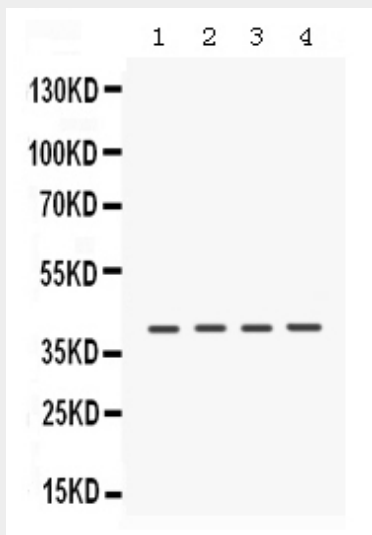
### Anti-CSNK1A1 Picoband Antibody - Protocols

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

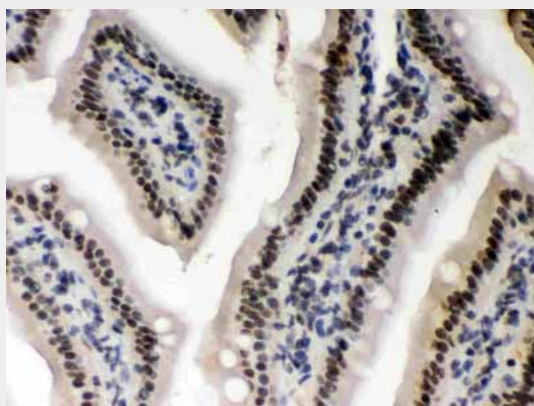
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

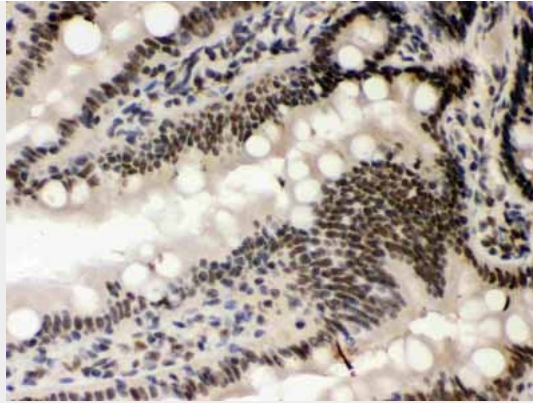
#### Anti-CSNK1A1 Picoband Antibody - Images



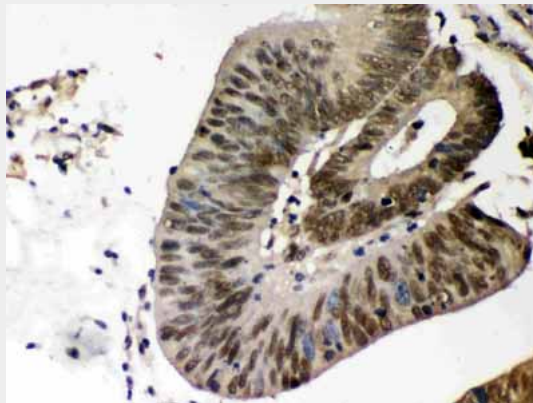
Anti- CSNK1A1 Picoband antibody, ABO12379, Western blotting  
All lanes: Anti CSNK1A1 (ABO12379) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 50ug  
Lane 2: Rat Kidney Tissue Lysate at 50ug  
Lane 3: Mouse Kidney Tissue Lysate at 50ug  
Lane 4: HELA Whole Cell Lysate at 40ug  
Predicted bind size: 39KD  
Observed bind size: 39KD



Anti- CSNK1A1 Picoband antibody, ABO12379, IHC(P)  
IHC(P): Mouse Intestine Tissue



Anti- CSNK1A1 Picoband antibody, ABO12379,IHC(P)IHC(P): Rat Intestine Tissue



Anti- CSNK1A1 Picoband antibody, ABO12379,IHC(P)IHC(P): Human Intestinal Cancer Tissue

#### **Anti-CSNK1A1 Picoband Antibody - Background**

Casein kinase I isoform alpha is an enzyme that in humans is encoded by the CSNK1A1 gene. The CSNK1A1 gene is mapped to chromosome 5q32 based on an alignment of the CSNK1A1 sequence with the genomic sequence (GRCh37). It is reported that both screens identified CK1-alpha as a bifunctional regulator of NF-kappa-B. CK1-alpha dynamically associates with the CBM complex on T cell receptor engagement to participate in cytokine production and lymphocyte proliferation. However, CK1-alpha kinase activity has a contrasting role by subsequently promoting the phosphorylation and inactivation of CARMA1. CK1-alpha has thus a dual 'gating' function which first promotes and then terminates receptor-induced NF-kappa-B. ABC DLBCL cells required CK1-alpha for constitutive NF-kappa-B activity, indicating that CK1-alpha functions as a conditionally essential malignancy gene.