

Anti-CSNK1A1 Picoband Antibody
Catalog # ABO12379

Specification

Anti-CSNK1A1 Picoband Antibody - Product Information

| | |
|-------------------|--------------------------|
| Application | WB, IHC-P |
| Primary Accession | P48729 |
| 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 Na₂HPO₄, 0.05mg Na₃.

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

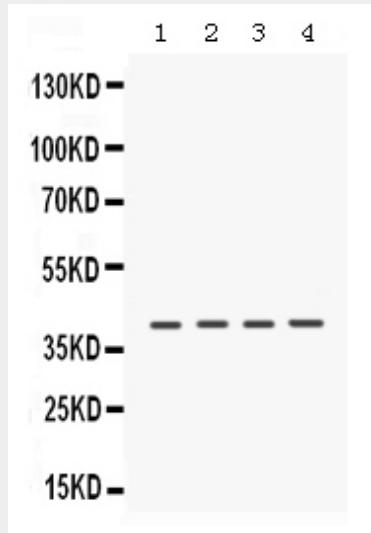
Anti-CSNK1A1 Picoband Antibody - Protocols

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

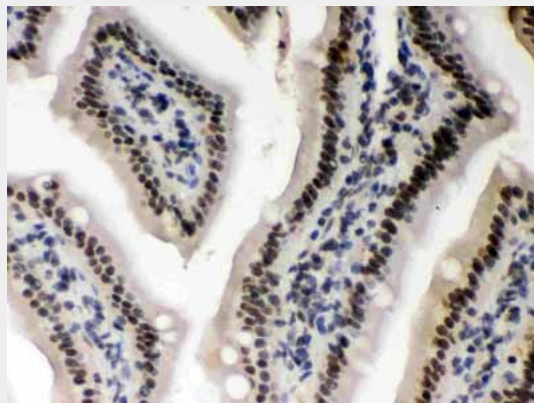
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

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

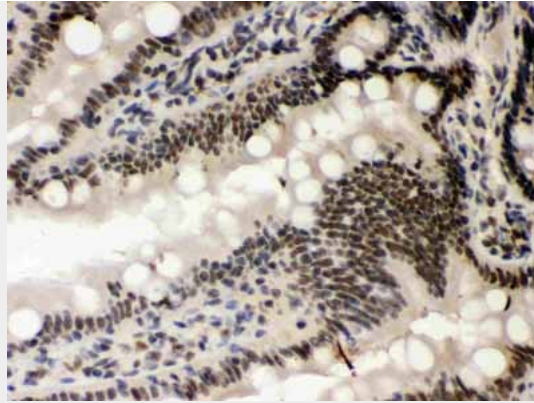
Anti-CSNK1A1 Picoband Antibody - Images



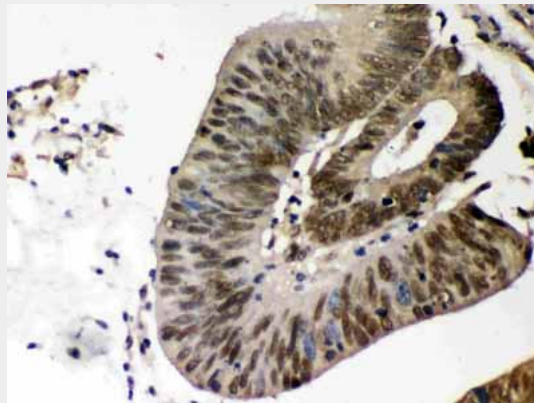
Anti- CSNK1A1 Picoband antibody, ABO12379, Western blotting All lanes: Anti CSNK1A1 (ABO12379) at 0.5ug/ml Lane 1: Rat Brain Tissue Lysate at 50ug Lane 2: Rat Kidney Tissue Lysate at 50ug Lane 3: Mouse Kidney Tissue Lysate at 50ug Lane 4: HELA Whole Cell Lysate at 40ug Predicted bind size: 39KD Observed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