**Product name**

Anti-Casein Kinase 1 delta / CSNK1D antibody

**Description**

Goat polyclonal to Casein Kinase 1 delta / CSNK1D

**Host species**

Goat

**Specificity**

This antibody is expected to recognise both reported isoforms of Casein Kinase 1 delta / CSNK1D.

**Tested applications**

Suitable for: WB, ICC/IF

**Species reactivity**

Reacts with: Human

Predicted to work with: Mouse, Rat, Cow, Dog, Chimpanzee, Macaque monkey

**Immunogen**

Synthetic peptide corresponding to Human Casein Kinase 1 delta/ CSNK1D aa 310-324 (internal sequence).

Sequence: DREERLRHSRNPATR

Database link: P48730

**Positive control**

WB: HEK 293 cell lysate. ICC/UF U251 cells.

**General notes**

Previously labelled as Casein Kinase 1 delta.

**Properties**

**Form**

Liquid

**Storage instructions**

Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

**Storage buffer**

Preservative: 0.02% Sodium Azide

Constituents: 0.5% BSA, Tris buffered saline, pH 7.3

**Purity**

Immunogen affinity purified

**Purification notes**

Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

**Clonality**

Polyclonal

**Isotype**

IgG
Function
Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates. It can phosphorylate a large number of proteins. Participates in Wnt signaling. Central component of the circadian clock. May act as a negative regulator of circadian rhythmicity by phosphorylating PER1 and PER2. Retains PER1 in the cytoplasm.

Tissue specificity
Expressed in all tissues examined, including brain, heart, lung, liver, pancreas, kidney, placenta and skeletal muscle. In blood, highly expressed in hemopoietic cells and mature granulocytes. Also found in monocytes and lymphocytes.

Involvement in disease
Defects in CSNK1D are a cause of familial advanced sleep-phase syndrome (FASPS) [MIM:604348]. FASPS is characterized by very early sleep onset and offset. Individuals are 'morning larks' with a 4 hours advance of the sleep, temperature and melatonin rhythms.

Sequence similarities
Belongs to the protein kinase superfamily. CK1 Ser/Thr protein kinase family. Casein kinase I subfamily.
Contains 1 protein kinase domain.

Post-translational modifications
Autophosphorylated on serine and threonine residues.

Cellular localization
Cytoplasm. Nucleus.

Applications
Our Abpromise guarantee covers the use of ab48031 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<td>ICC/IF</td>
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Target

Images
Western blot - Anti-Casein Kinase 1 delta / CSNK1D antibody (ab48031) at 0.3 µg/ml + HEK 293 cell lysate in RIPA buffer at 35 µg

**Predicted band size:** 47 kDa
**Observed band size:** 48 kDa

*why is the actual band size different from the predicted?*

Primary incubation was 1 hour. Detected using chemiluminescence.

Immunocytochemistry/Immunofluorescence analysis of U251 cells labelling Casein Kinase 1 delta / CSNK1D with ab48031 at 10 µg/ml. Cells were paraformaldehyde fixed and permeabilized with 0.15% triton. Primary antibody incubation was for 1 hour followed by incubation with an Alexa Fluor® 488-conjugated secondary antibody at 2 µg/ml. DAPI nuclear counterstain was used.

Negative control: Unimmunized goat IgG (10 µg/ml) followed by an Alexa Fluor® 488-conjugated secondary antibody (2 µg/ml).

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