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Goat Anti-Casein Kinase 1, delta Antibody

Peptide-affinity purified goat antibody
Catalog # AF1193a

Specification

Goat Anti-Casein Kinase 1, delta Antibody - Product Information

Application	**WB, IF**
Primary Accession	P48730
Other Accession	NP_620693, 1453, 104318 (mouse), 64462 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**47330**

Goat Anti-Casein Kinase 1, delta Antibody - Additional Information

Gene ID 1453

Other Names
Casein kinase I isoform delta, CKI-delta, CKId, 2.7.11.1, Tau-protein kinase CSNK1D, 2.7.11.26, CSNK1D, HCKID

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-Casein Kinase 1, delta Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-Casein Kinase 1, delta Antibody - Protein Information

Name CSNK1D

Synonyms HCKID

Function
Essential serine/threonine-protein kinase that regulates diverse cellular growth and survival processes including Wnt signaling, DNA repair and circadian rhythms. It can phosphorylate a large number of proteins. Casein kinases are operationally defined by their preferential utilization of

acidic proteins such as caseins as substrates. Phosphorylates connexin-43/GJA1, MAP1A, SNAPIN, MAPT/TAU, TOP2A, DCK, HIF1A, EIF6, p53/TP53, DVL2, DVL3, ESR1, AIB1/NCOA3, DNMT1, PKD2, YAP1, PER1 and PER2. Central component of the circadian clock. In balance with PP1, determines the circadian period length through the regulation of the speed and rhythmicity of PER1 and PER2 phosphorylation. Controls PER1 and PER2 nuclear transport and degradation. YAP1 phosphorylation promotes its SCF(beta-TRCP) E3 ubiquitin ligase-mediated ubiquitination and subsequent degradation. DNMT1 phosphorylation reduces its DNA-binding activity. Phosphorylation of ESR1 and AIB1/NCOA3 stimulates their activity and coactivation. Phosphorylation of DVL2 and DVL3 regulates WNT3A signaling pathway that controls neurite outgrowth. Phosphorylates NEDD9/HEF1 (By similarity). EIF6 phosphorylation promotes its nuclear export. Triggers down- regulation of dopamine receptors in the forebrain. Activates DCK in vitro by phosphorylation. TOP2A phosphorylation favors DNA cleavable complex formation. May regulate the formation of the mitotic spindle apparatus in extravillous trophoblast. Modulates connexin-43/GJA1 gap junction assembly by phosphorylation. Probably involved in lymphocyte physiology. Regulates fast synaptic transmission mediated by glutamate.

Cellular Location
Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, perinuclear region. Cell membrane. Cytoplasm, cytoskeleton, spindle. Golgi apparatus Note=Localized at mitotic spindle microtubules, and at the centrosomes and interphase in interphase cells. Recruited to the spindle apparatus and the centrosomes in response to DNA-damage. Correct subcellular localization requires kinase activity

Tissue Location
Expressed in all tissues examined, including brain, heart, lung, liver, pancreas, kidney, placenta and skeletal muscle However, kinase activity is not uniform, with highest kinase activity in splenocytes. In blood, highly expressed in hemopoietic cells and mature granulocytes. Also found in monocytes and lymphocytes

Goat Anti-Casein Kinase 1, delta 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 Cytomety
- Cell Culture

Goat Anti-Casein Kinase 1, delta Antibody - Images

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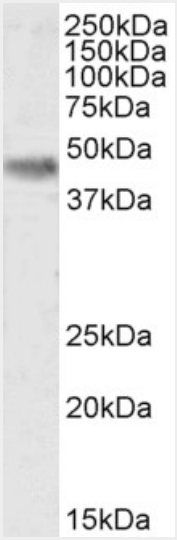
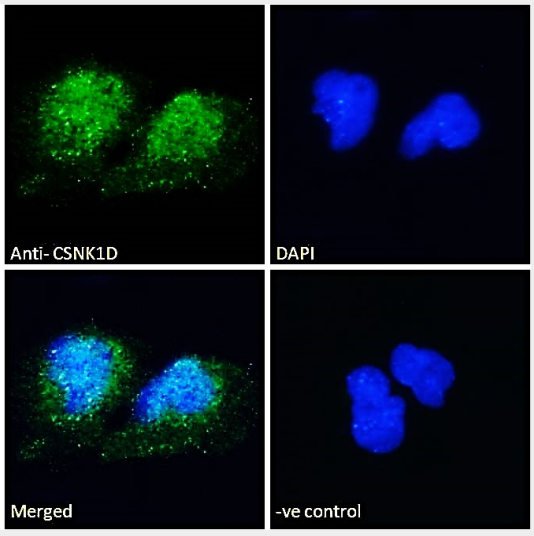
AF1193a (0.3 µg/ml) staining of HEK 293 cell lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



EB07232 (0.2µg/ml) staining of Mouse Brain lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.



EB07232 Immunofluorescence analysis of paraformaldehyde fixed U251 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody

(2ug/ml), showing nuclear staining. The nuclear stain is DAPI (blue)

Goat Anti-Casein Kinase 1, delta Antibody - Background

This gene is a member of the casein kinase I (CKI) gene family whose members have been implicated in the control of cytoplasmic and nuclear processes, including DNA replication and repair. The encoded protein is highly similar to the mouse and rat CK1 delta homologs. Two transcript variants encoding different isoforms have been found for this gene.

Goat Anti-Casein Kinase 1, delta Antibody - References

Centrosome-related genes, genetic variation, and risk of breast cancer. Olson JE, et al. Breast Cancer Res Treat, 2010 May 28. PMID 20508983.
CLOCK gene variants associate with sleep duration in two independent populations. Allebrandt KV, et al. Biol Psychiatry, 2010 Jun 1. PMID 20149345.
A coordinated phosphorylation by Lats and CK1 regulates YAP stability through SCF(beta-TRCP). Zhao B, et al. Genes Dev, 2010 Jan 1. PMID 20048001.
Association study of 21 circadian genes with bipolar I disorder, schizoaffective disorder, and schizophrenia. Mansour HA, et al. Bipolar Disord, 2009 Nov. PMID 19839995.
CKIepsilon/delta-dependent phosphorylation is a temperature-insensitive, period-determining process in the mammalian circadian clock. Isojima Y, et al. Proc Natl Acad Sci U S A, 2009 Sep 15. PMID 19805222.