SANTA CRUZ BIOTECHNOLOGY, INC.

casein kinase Iδ (C-18): sc-6473

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Casein kinase I (also designated CKI) and casein kinase II (also designated CKII) compose a family of serine/ threonine protein kinases which are present in all eukaryotes examined to date. CKI family members, which include CKIα, γ, ε and δ, have been implicated in the control of cytoplasmic and nuclear processes, including DNA replication and repair. CKII is usually expressed as a tetrameric complex consisting of either an $\alpha 2\beta 2$ or an $\alpha\alpha'\beta 2$ structure. The α catalytic subunit is stimulated by the β regulatory subunit, which undergoes autophosphorylation. CKII activity is high in the cytosol and nucleus of proliferating and differentiating cells. CKII is known to phosphorylate more than 100 different substrates including nuclear oncoproteins, transcription factors and enzymes involved in DNA metabolism.

REFERENCES

1. Lozeman, F.J., et al. 1990. Isolation and characterization of human cDNA clones encoding the α and the α′ subunits of casein kinase II. Biochem. 29: 8436-8447.
2. Tuazon, P.T., et al. 1991. Casein kinase I and II—multipotential serine protein kinases: structure, function, and regulation. Adv. Second Messenger Phosphoprotein Res. 23: 123-164.
3. Litchfield, D.W., et al. 1993. Casein kinase II in signal transduction and cell cycle regulation. Mol. Cell. Biochem. 127-128: 187-199.
4. Graves, P.R., et al. 1993. Molecular cloning, expresion, and characterization of a 49 kDa casein kinase I isoform from rat testis. J. Biol. Chem. 268: 6394-401.
5. Fish, K.J., et al. 1995. Isolation and characterization of human casein kinase Ie (CKI), a novel member of the CKI gene family. J. Biol. Chem. 270: 14875-14883
6. Zhai, L., et al. 1995. Casein kinase I γ subfamily. Molecular cloning, expression, and characterization of three mammalian isoforms and complementation of defects in the *Saccharomyces cerevisiae* YCK genes. J. Biol. Chem. 270: 12717-12724.

CHROMOSOMAL LOCATION

Genetic locus: CSNK1D (human) mapping to 17q25; Csnk1d (mouse) mapping to 11 E2.

SOURCE

casein kinase Iδ (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of casein kinase Iδ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6473 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

casein kinase Iδ (C-18) is recommended for detection of casein kinase Iδ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

casein kinase Iδ (C-18) is also recommended for detection of casein kinase Iδ in additional species, including bovine.

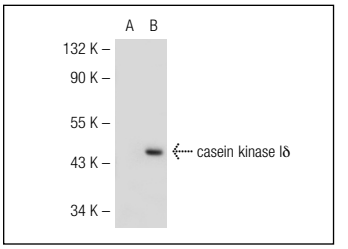
Suitable for use as control antibody for casein kinase Iδ siRNA (h): sc-29910, casein kinase Iδ siRNA (m): sc-29911, casein kinase Iδ shRNA Plasmid (h): sc-29910-SH, casein kinase Iδ shRNA Plasmid (m): sc-29911-SH, casein kinase Iδ shRNA (h) Lentiviral Particles: sc-29910-V and casein kinase Iδ shRNA (m) Lentiviral Particles: sc-29911-V.

Molecular Weight of casein kinase Iδ under reducing/denaturing conditions: 49 kDa.

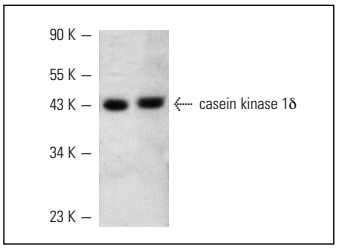
Molecular Weight of casein kinase Iδ C-terminal degradation product: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or rat testis extract: sc-2400.

DATA



casein kinase Iδ (C-18): sc-6473. Western blot analysis of casein kinase Iδ expression in non-transfected: sc-117752 (**A**) and mouse casein kinase Iδ transfected: sc-125097 (**B**) 293T whole cell lysates.



casein kinase 1δ (C-18): sc-6473. Western blot analysis of casein kinase 1δ expression in K-562 (**A**) whole cell lysate and rat testis (**B**) extract.

SELECT PRODUCT CITATIONS

1. Lin, L., et al. 2006. Coordination of NFκB and NFAT antagonism by the forkhead transcription factor FOXD1. J. Immunol. 176: 4793-4803.
2. Gao, D., et al. 2009. Phosphorylation by Akt1 promotes cytoplasmic localization of Skp2 and impairs APCCdh1-mediated Skp2 destruction. Nat. Cell Biol. 11: 397-408.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.