SANTA CRUZ BIOTECHNOLOGY, INC.

casein kinase Iγ2 (C-20): sc-18497

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 α2β2 or an αα'β2 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: 6394-6401.
5. 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.
6. Fish, K.J., et al. 1995. Isolation and characterization of human casein kinase Iε (CKI), a novel member of the CKI gene family. J. Biol. Chem. 270: 14875-14883.

CHROMOSOMAL LOCATION

Genetic locus: CSNK1G2 (human) mapping to 19p13.3.

SOURCE

casein kinase Iγ2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of casein kinase Iγ2 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-18497 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 Iγ2 (C-20) is recommended for detection of casein kinase Iγ2 of 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).

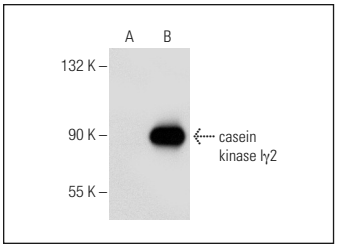
casein kinase Iγ2 (C-20) is also recommended for detection of casein kinase Iγ2 in additional species, including canine.

Suitable for use as control antibody for casein kinase Iγ2 siRNA (h): sc-38959, casein kinase Iγ2 shRNA Plasmid (h): sc-38959-SH and casein kinase Iγ2 shRNA (h) Lentiviral Particles: sc-38959-V.

Molecular Weight of casein kinase Iγ2: 70-75 kDa.

Positive Controls: casein kinase Iγ2 (h2): 293T Lysate: sc-172788, HeLa nuclear extract: sc-2120 or K-562 whole cell lysate: sc-2203.

DATA



casein kinase Iγ2 (C-20): sc-18497. Western blot analysis of casein kinase Iγ2 expression in non-transfected: sc-117752 (**A**) and human casein kinase Iγ2 transfected: sc-172788 (**B**) 293T whole cell lysates.

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.