SANTA CRUZ BIOTECHNOLOGY, INC.

casein kinase Iε (h3): 293 Lysate: sc-159784

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. Biochemistry 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.
7. Allende, J.E., et al. 1995. Protein kinases. 4. Protein kinase CK2: an enzyme with multiple substrates and a puzzling regulation. FASEB J. 9: 313-323.

CHROMOSOMAL LOCATION

Genetic locus: CSNK1E (human) mapping to 22q13.1.

PRODUCT

casein kinase Iε (h3): 293 Lysate represents a lysate of human casein kinase Iε transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

casein kinase Iε (h3): 293 Lysate is suitable as a Western Blotting positive control for human reactive casein kinase Iε antibodies. Recommended use: 10-20 µl per lane.

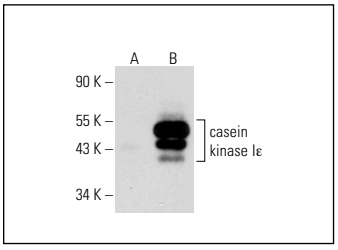
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

casein kinase Iε (A-6): sc-374069 is recommended as a positive control antibody for Western Blot analysis of enhanced human casein kinase Iε expression in casein kinase Iε transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

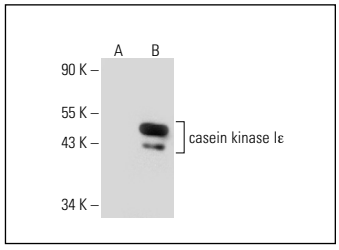
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



casein kinase Iε (A-6): sc-374069. Western blot analysis of casein kinase Iε expression in non-transfected: sc-117752 (**A**) and human casein kinase Iε transfected: sc-159784 (**B**) 293T whole cell lysates.



casein kinase Iε (A-2): sc-373912. Western blot analysis of casein kinase Iε expression in non-transfected: sc-117752 (**A**) and human casein kinase Iε transfected: sc-159784 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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