

casein kinase II α (m): 293T Lysate: sc-126578

BACKGROUND

Casein kinase I (also designated CKI) and casein kinase II (CKII) compose a family of serine/threonine protein kinases which are present in all eukaryotes examined to date. Casein kinase I family members, which include casein kinase I α , I γ , I δ and I ϵ , have been implicated in the control of cytoplasmic and nuclear processes, including DNA replication and repair. Casein kinase II is usually expressed as a tetrameric complex consisting of either an $\alpha_2\beta_2$ or an $\alpha'\beta_2$ structure. The α catalytic subunit is stimulated by the β regulatory subunit, which undergoes autophosphorylation. Casein kinase II activity is high in the cytosol and nucleus of proliferating and differentiating cells. Casein kinase II is known to phosphorylate more than 100 different substrates, including nuclear oncoproteins, transcription factors and enzymes involved in DNA metabolism.

REFERENCES

- Lozeman, F.J., Litchfield, D.W., Piening, C., Takio, K., Walsh, K.A. and Krebs, E.G. 1990. Isolation and characterization of human cDNA clones encoding the α and the α' subunits of casein kinase II. *Biochemistry* 29: 8436-8447.
- Tuazon, P.T. and Traugh, J.A. 1991. Casein kinase I and II—multipotential serine protein kinases: structure, function and regulation. *Adv. Second Messenger Phosphoprotein Res.* 23: 123-164.
- Graves, P.R., Haas, D.W., Hagedorn, C.H., DePaoli Roach, A.A. and Roach, P.J. 1993. Molecular cloning, expression and characterization of a 49 kDa casein kinase I isoform from rat testis. *J. Biol. Chem.* 268: 6394-6401.
- Litchfield, D.W. and Lüscher, B. 1993. Casein kinase II in signal transduction and cell cycle regulation. *Mol. Cell. Biochem.* 127-128: 187-199.
- Zhai, L., Graves, P.R., Robinson, L.C., Italiano, M., Culbertson, M.R., Rowles, J., Cobb, M.H., DePaoli Roach, A.A. and Roach, P.J. 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: Csnk2a1 (mouse) mapping to 2 G3.

PRODUCT

casein kinase II α (m): 293T Lysate represents a lysate of mouse casein kinase II α transfected 293T cells and is provided as 100 μ g protein in 200 μ l 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.

PROTOCOLS

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

APPLICATIONS

casein kinase II α (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive casein kinase II α antibodies. Recommended use: 10-20 μ l per lane.

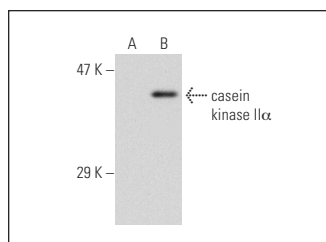
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

casein kinase II α (1AD9): sc-12738 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse casein kinase II α expression in casein kinase II α transfected 293T 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 II α (1AD9): sc-12738. Western blot analysis of casein kinase II α expression in non-transfected: sc-117752 (A) and mouse casein kinase II α transfected: sc-126578 (B) 293T whole cell lysates.

RESEARCH USE

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