SANTA CRUZ BIOTECHNOLOGY, INC.

casein kinase Iγ2 (F-10): sc-390970

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 Iα, Iγ, Iδ and Iε, 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 a 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

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. 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.
3. Graves, P.R., et al. 1993. Molecular cloning, expression and characterization of a 49 kDa casein kinase I isoform from rat testis. J. Biol. Chem. 268: 6394-6401.
4. Litchfield, D.W. and Luscher, B. 1993. Casein kinase II in signal transduction and cell cycle regulation. Mol. Cell. Biochem. 127-128: 187-199.
5. Allende, J.E. and Allende, C.C. 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: CSNK1G2 (human) mapping to 19p13.3.

SOURCE

casein kinase Iγ2 (F-10) is a mouse monoclonal antibody raised against amino acids 1-40 mapping at the N-terminus of casein kinase Iγ2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

casein kinase Iγ2 (F-10) is available conjugated to agarose (sc-390970 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390970 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390970 PE), fluorescein (sc-390970 FITC), Alexa Fluor® 488 (sc-390970 AF488), Alexa Fluor® 546 (sc-390970 AF546), Alexa Fluor® 594 (sc-390970 AF594) or Alexa Fluor® 647 (sc-390970 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390970 AF680) or Alexa Fluor® 790 (sc-390970 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

casein kinase Iγ2 (F-10) is recommended for detection of casein kinase Iγ2 of human origin by Western Blotting (starting dilution 1:100, 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).

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.

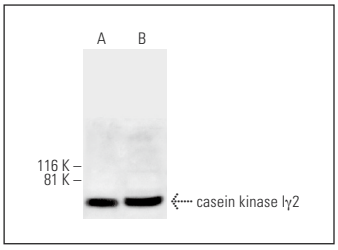
Molecular Weight of casein kinase Iγ2: 70-75 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181 or K-562 whole cell lysate: sc-2203.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



casein kinase Iγ2 (F-10): sc-390970. Western blot analysis of casein kinase Iγ2 expression in NTERA-2 cl.D1 (**A**) and K-562 (**B**) 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.

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.

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