

casein kinase Iδ (H-60): sc-20709

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 CKI α , 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

- 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. J.* 268: 8436-8447.
- 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.
- Litchfield, D.W., et al. 1993. Casein kinase II in signal transduction and cell cycle regulation. *Mol. Cell. Biochem.* 127-128: 187-199.
- 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: 6394-401.
- Fish, K.J., et al. 1995. Isolation and characterization of human casein kinase I ϵ (CKI), a novel member of the CKI gene family. *J. Biol. Chem.* 270: 14875-14883.
- 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: CSNK1D (human) mapping to 17q25; Csnk1d (mouse) mapping to 11 E2.

SOURCE

casein kinase I δ (H-60) is a rabbit polyclonal antibody raised against amino acids 296-355 mapping near the C-terminus of casein kinase I δ of human origin.

PRODUCT

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

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.

APPLICATIONS

casein kinase I δ (H-60) is recommended for detection of casein kinase I δ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 μ g per 100–500 μ g 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 I δ (H-60) is also recommended for detection of casein kinase I δ in additional species, including equine, canine, bovine and avian.

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

Molecular Weight of casein kinase I δ : 49 kDa.

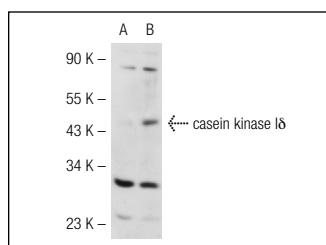
Molecular Weight of casein kinase I δ C-terminal degradation product: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or casein kinase I δ (m): 293T Lysate: sc-125097.

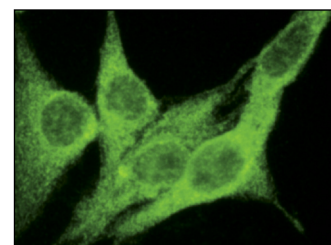
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



casein kinase I δ (H-60): sc-20709. Western blot analysis of casein kinase I δ expression in non-transfected: sc-117752 (A) and mouse casein kinase I δ transfected: sc-125097 (B) 293T whole cell lysates.



casein kinase I δ (H-60): sc-20709. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Rubio de la Torre, E., et al. 2009. Combined kinase inhibition modulates parkin inactivation. *Hum. Mol. Genet.* 18: 809-823.