

casein kinase $\text{I}\gamma 3$ (N-15)-R: sc-18500-R

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.* 29: 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: 6394-6401.

CHROMOSOMAL LOCATION

Genetic locus: CSNK1G3 (human) mapping to 5q23.2; Csnk1g3 (mouse) mapping to 18 D1.

SOURCE

casein kinase $\text{I}\gamma 3$ (N-15)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of casein kinase $\text{I}\gamma 3$ 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-18500 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

casein kinase $\text{I}\gamma 3$ (N-15)-R is recommended for detection of casein kinase $\text{I}\gamma 3$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 $\text{I}\gamma 3$ (N-15)-R is also recommended for detection of casein kinase $\text{I}\gamma 3$ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for casein kinase $\text{I}\gamma 3$ siRNA (h): sc-38961, casein kinase $\text{I}\gamma 3$ siRNA (m): sc-38962, casein kinase $\text{I}\gamma 3$ shRNA Plasmid (h): sc-38961-SH, casein kinase $\text{I}\gamma 3$ shRNA Plasmid (m): sc-38962-SH, casein kinase $\text{I}\gamma 3$ shRNA (h) Lentiviral Particles: sc-38961-V and casein kinase $\text{I}\gamma 3$ shRNA (m) Lentiviral Particles: sc-38962-V.

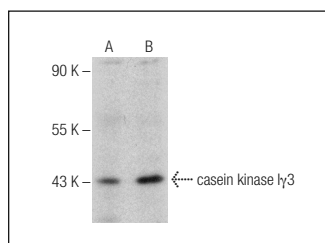
Molecular Weight of casein kinase $\text{I}\gamma 3$: 51 kDa.

Positive Controls: mouse testis extract: sc-2405, rat testis extract: sc-2400 or NIH/3T3 whole cell lysate: sc-2210.

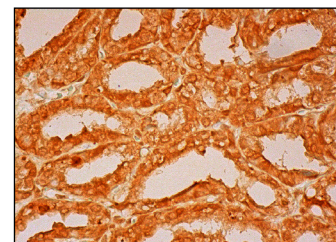
RECOMMENDED SECONDARY REAGENTS

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 Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



casein kinase $\text{I}\gamma 3$ (N-15)-R: sc-18500-R. Western blot analysis of casein kinase $\text{I}\gamma 3$ expression in mouse testis (A) and rat testis (B) tissue extracts.



casein kinase $\text{I}\gamma 3$ (N-15)-R: sc-18500-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic and nuclear staining of glandular cells.

RESEARCH USE

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