

CaMKI β (Y-14): sc-131454

BACKGROUND

The Ca²⁺/calmodulin-dependent protein kinases (CaMKs) comprise a structurally related subfamily of serine/threonine kinases. CaMKI β (Ca²⁺/calmodulin-dependent protein kinase type 1B), also known as PNCK (pregnancy up-regulated non-ubiquitously expressed CaM kinase) or BSTK3, is a 343 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one protein kinase domain. Existing as multiple alternatively spliced isoforms, CaMKI β functions to catalyze the ATP-dependent phosphorylation of CaMKI, an event that activates CaMKI activity and may be important for Ca²⁺-triggered signaling cascades within the cell. The gene encoding CaMKI β maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PNCK (human) mapping to Xq28; Pnck (mouse) mapping to X A7.3.

SOURCE

CaMKI β (Y-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CaMKI β of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

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

Blocking peptide available for competition studies, sc-131454 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CaMKI β (Y-14) is recommended for detection of CaMKI β isoforms 1, 2 and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with CaMKI β isoform 4.

CaMKI β (Y-14) is also recommended for detection of CaMKI β isoforms 1, 2 and 3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CaMKI β siRNA (h): sc-91129, CaMKI β siRNA (m): sc-141994, CaMKI β shRNA Plasmid (h): sc-91129-SH, CaMKI β shRNA Plasmid (m): sc-141994-SH, CaMKI β shRNA (h) Lentiviral Particles: sc-91129-V and CaMKI β shRNA (m) Lentiviral Particles: sc-141994-V.

Molecular Weight of CaMKI β : 38 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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