SANTA CRUZ BIOTECHNOLOGY, INC.

CaMKIIN2 (G-16): sc-102405

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The Power to Question

BACKGROUND

CaMKII is a ubiquitously expressed serine/threonine protein kinase that is activated by Ca^{2+} and calmodulin (CaM) and has been implicated in regulation of the cell cycle and transcription. CaMK2N2 (Calcium/calmodulin-dependent protein kinase II inhibitor 2) is a 79 amino acid protein that specifically binds to the catalytic domain of CaMKIIα and CaMKIIβ, essentially trapping calcium/CaM on CaMKII and potently inhibiting kinase activity. Overexpression of CaMK2N2 in colon adenocarcinoma LoVo cells results in a decrease of viable cells, as well as an inhibition of cell proliferation and a blocking of cell growth. CaMK2N2 is highly expressed in HeLa S3, MOLT and Raji cell lines, as well as in kidney and liver, and is moderately expressed in placenta, skeletal muscle, heart and the K-562 cell line.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CAMK2N2 (human) mapping to 3q27.1; Camk2n2 (mouse) mapping to 16 B1.

RESEARCH USE

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

SOURCE

CaMKIIN2 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CaMKIIN2 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-102405 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CaMKIIN2 (G-16) is recommended for detection of CaMKIIN2 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 CaMK2N1.

Suitable for use as control antibody for CaMKIIN2 siRNA (h): sc-78404, CaMKIIN2 siRNA (m): sc-141993, CaMKIIN2 shRNA Plasmid (h): sc-78404-SH, CaMKIIN2 shRNA Plasmid (m): sc-141993-SH, CaMKIIN2 shRNA (h) Lentiviral Particles: sc-78404-V and CaMKIIN2 shRNA (m) Lentiviral Particles: sc-141993-V.

Molecular Weight of CaMKIIN2: 8 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.

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.