SANTA CRUZ BIOTECHNOLOGY, INC.

NCK1 (S-15): sc-22442

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The Power to Question

BACKGROUND

The NCK family of SH2/SH3 adaptor proteins consists of two members, NCK1 (NCKα) and NCK2 (NCKβ), which couple tyrosine kinase signaling, including the EGF and PDGF receptor-pathways, to downstream signaling proteins. Specifically, overexpression of NCK1 in NIH/3T3 cells decreases DNA synthesis stimulated by EGF. Furthermore, the SH2 domain of NCK2 inhibits EGF- and PDGF-induced DNA synthesis. The SH3 domain of NCK binds a proline-rich domain on PAK, a known Actin cytoskeleton regulator. The NCK protein thus mediates the interaction between PAK and RAC. The NCK2 protein binds human PDGFR-β (Tyr 1009); overexpression of NCK2 inhibits PDGF-induced membrane ruffling and lamellipod formation. Various growth factor receptors, cell surface antigens and adhesion molecules phosphorylate mammalian NCK1 and NCK2.The human NCK1 and NCK2 genes map to chromosomes 3q22.3 and 2q12, respectively.

REFERENCES

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3. Chen, M., et al. 1998. Identification of NCK family genes, chromosomal localization, expression, and signaling specificity. J. Biol. Chem. 273: 25171-25178.
4. Chen, M., et al. 2000. NCKβ adapter regulates Actin polymerization in NIH/3T3 fibroblasts in response to platelet-derived growth factor bb. Mol. Cell. Biol. 20: 7867-7880.
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CHROMOSOMAL LOCATION

Genetic locus: NCK1 (human) mapping to 3q22.3; Nck1 (mouse) mapping to 9 E3.3.

SOURCE

NCK1 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NCK1 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-22442 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NCK1 (S-15) is recommended for detection of NCK1 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).

NCK1 (S-15) is also recommended for detection of NCK1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NCK1 siRNA (h): sc-40967, NCK1 siRNA (m): sc-40968, NCK1 shRNA Plasmid (h): sc-40967-SH, NCK1 shRNA Plasmid (m): sc-40968-SH, NCK1 shRNA (h) Lentiviral Particles: sc-40967-V and NCK1 shRNA (m) Lentiviral Particles: sc-40968-V.

Molecular Weight of NCK1: 47 kDa.

Positive Controls: H4 cell lysate: sc-2408, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

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.

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.