SANTA CRUZ BIOTECHNOLOGY, INC.

NCK1 (h3): 293T Lysate: sc-177605

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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 2q12.2, respectively.

REFERENCES

1. Park, D. and Rhee, S.G. 1992. Phosphorylation of Nck in response to a variety of receptors, phorbol myristate acetate, and cyclic AMP. Mol. Cell. Biol. 12: 5816-5823.
2. Huebner, K., Kastury, K., Druck, T., Salcini, A.E., Lanfrancone, L., Pelicci, G., Lowenstein, E., Li, W., Park, S.H., Cannizzaro, L., et al. 1994. Chromosome locations of genes encoding human signal transduction adapter proteins, Nck (NCK), Shc (SHC1), and Grb2 (GRB2). Genomics 22: 281-287.
3. Chen, M., She, H., Davis, E.M., Spicer, C.M., Kim, L., Ren, R., Le Beau, M.M. and Li, W. 1998. Identification of Nck family genes, chromosomal localization, expression, and signaling specificity. J. Biol. Chem. 273: 25171-25178.
4. Chen, M., She, H., Kim, A., Woodley, D.T. and Li, W. 2000. Nckβ adapter regulates Actin polymerization in NIH/3T3 fibroblasts in response to platelet-derived growth factor bb. Mol. Cell. Biol. 20: 7867-7880.
5. Buday, L., Wunderlich, L. and Tamas, P. 2002. The Nck family of adapter proteins. Regulators of Actin cytoskeleton. Cell. Signal. 14: 723-731.
6. Kiosses, W.B., Hood, J., Yang, S., Gerritsen, M.E., Cheresh, D.A., Alderson, N. and Schwartz, M.A. 2002. A dominant-negative p65 PAK peptide inhibits angiogenesis. Circ. Res. 90: 697-702.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604930. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: NCK1 (human) mapping to 3q22.3.

PRODUCT

NCK1 (h3): 293T Lysate represents a lysate of human NCK1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

NCK1 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive NCK1 antibodies. Recommended use: 10-20 µl per lane.

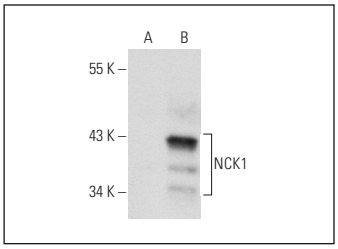
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NCK1 (108): sc-136232 is recommended as a positive control antibody for Western Blot analysis of enhanced human NCK1 expression in NCK1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



NCK1 (108): sc-136232. Western blot analysis of NCK1 expression in non-transfected: sc-117752 (**A**) and human NCK1 transfected: sc-177605 (**B**) 293T whole cell lysates.

RESEARCH USE

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