

NCK1/2 (C-19): sc-290

BACKGROUND

The NCK family of SH2/SH3 adaptor proteins consists of two members, NCK1 (NCK α) and NCK2 (NCK β), 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.

CHROMOSOMAL LOCATION

Genetic locus: NCK1 (human) mapping to 3q22.3, NCK2 (human) mapping to 2q12.2; Nck1 (mouse) mapping to 9 E3.3, Nck2 (mouse) mapping to 1 B.

SOURCE

NCK1/2 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of NCK1 of human origin.

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-290 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NCK1/2 (C-19) is recommended for detection of NCK1 and NCK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

NCK1/2 (C-19) is also recommended for detection of NCK1 and NCK2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NCK1/2 siRNA (h): sc-43959, NCK1/2 shRNA Plasmid (h): sc-43959-SH and NCK1/2 shRNA (h) Lentiviral Particles: sc-43959-V.

Molecular Weight of NCK1/2: 47 kDa.

Positive Controls: U-937 cell lysate: sc-2239, A-431 whole cell lysate: sc-2201 or mouse testis extract: sc-2405.

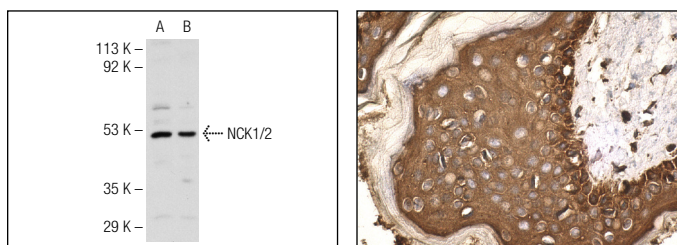
STORAGE

Store at 4 $^{\circ}$ 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.

DATA



NCK1/2 (C-19): sc-290. Western blot analysis of NCK1/2 expression in U-937 (A) and A-431 (B) whole cell lysates.

NCK1/2 (C-19): sc-290. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nuclear staining of epidermal cells.

SELECT PRODUCT CITATIONS

- Galisteo, M.L., et al. 1996. The adaptor protein Nck links receptor tyrosine kinases with the serine-threonine kinase Pak1. *J. Biol. Chem.* 271: 20997-21000.
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- Latreille, M., et al. 2006. NCK in a complex containing the catalytic subunit of protein phosphatase 1 regulates eukaryotic initiation factor 2 α signaling and cell survival to endoplasmic reticulum stress. *J. Biol. Chem.* 281: 26633-26644.
- Tehrani, S., et al. 2007. Src phosphorylation of cortactin enhances Actin assembly. *Proc. Natl. Acad. Sci. USA* 104: 11933-11938.
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