

# NCK2 (8.8): sc-20020

## BACKGROUND

The NCK family of SH2/SH3 adaptor proteins consists of two members, NCK1 (NCK $\alpha$ ) and NCK2 (NCK $\beta$ ), 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- $\beta$  (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

NCK2 (8.8) is a mouse monoclonal antibody epitope mapping within amino acids 176-274 of NCK2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NCK2 (8.8) is available conjugated to agarose (sc-20020 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20020 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20020 PE), fluorescein (sc-20020 FITC), Alexa Fluor<sup>®</sup> 488 (sc-20020 AF488), Alexa Fluor<sup>®</sup> 546 (sc-20020 AF546), Alexa Fluor<sup>®</sup> 594 (sc-20020 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-20020 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-20020 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-20020 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

NCK2 (8.8) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

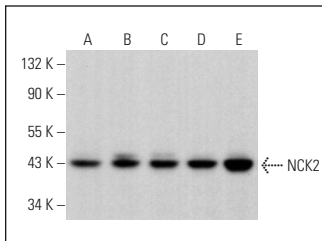
Molecular Weight of NCK2: 47 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, IB4 whole cell lysate: sc-364780 or Hep G2 cell lysate: sc-2227.

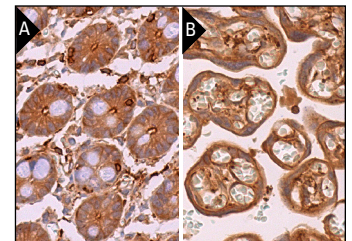
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



NCK2 (8.8): sc-20020. Western blot analysis of NCK2 expression in Hep G2 (A), K-562 (B), A-431 (C), NIH/3T3 (D) and IB4 (E) whole cell lysates.



NCK2 (8.8): sc-20020. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells (B).

## SELECT PRODUCT CITATIONS

- Zhou, D., et al. 2004. A novel crosstalk mechanism between nuclear receptor-mediated and growth factor/Ras-mediated pathways through PNRC-GRB2 interaction. *Oncogene* 23: 5394-5404.
- Grundt, A., et al. 2009. Direct effects of osteoprotegerin on human bone cell metabolism. *Biochem. Biophys. Res. Commun.* 389: 550-555.
- Gehrmlich, K., et al. 2010. Ponsin interacts with Nck adapter proteins: implications for a role in cytoskeletal remodelling during differentiation of skeletal muscle cells. *Eur. J. Cell Biol.* 89: 351-364.
- Gelmedin, V., et al. 2017. Evidence for integrin—venus kinase receptor 1 alliance in the ovary of *Schistosoma mansoni* females controlling cell survival. *PLoS Pathog.* 13: e1006147.

## 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.