

# Nek4 (C-17): sc-5517

## BACKGROUND

NIMA was originally shown in *Aspergillus nidulans* to be necessary for entry into mitosis. NIMA-related mammalian proteins have since been identified as Nek1, Nek2, Nek3 and Nek4 (also designated STK2 or NRK2). High expression of Nek1 is seen in male and female germ cell lines of mouse. Nek2 is the closest known mammalian relative to NIMA. Like NIMA, Nek2 expression peaks at the G<sub>2</sub> to M phase transition. Nek3 is a predominantly cytoplasmic enzyme that was detectable in all organs studied. Levels of Nek3 seem to remain unchanged throughout the cell cycle, but appear to be elevated in G<sub>0</sub>-arrested, quiescent fibroblasts. In developing testicular germ cells, differential patterns of expression were seen for Nek1, Nek2 and Nek4, indicating possible overlapping, but non-identical functions.

## REFERENCES

- Osmani, S.A., et al. 1988. Mitotic induction and maintenance by overexpression of a G<sub>2</sub>-specific gene that encodes a potential protein kinase. *Cell* 53: 237-244.
- Letwin, K., et al. 1992. A mammalian dual specificity protein kinase, Nek1, is related to the NIMA cell cycle regulator and highly expressed in meiotic germ cells. *EMBO J.* 11: 3521-3531.

## CHROMOSOMAL LOCATION

Genetic locus: NEK4 (human) mapping to 3p21.1.

## SOURCE

Nek4 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Nek4 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-5517 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Nek4 (C-17) is recommended for detection of Nek4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Nek4 siRNA (h): sc-106815, Nek4 shRNA Plasmid (h): sc-106815-SH and Nek4 shRNA (h) Lentiviral Particles: sc-106815-V.

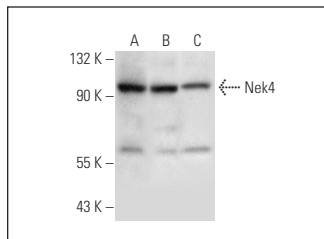
Molecular Weight of Nek4: 105 kDa.

Positive Controls: Nek4 (h): 293T Lysate: sc-116594, A-431 whole cell lysate: sc-2201 or ES-2 cell lysate: sc-24674.

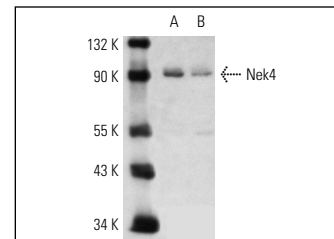
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Nek4 (C-17): sc-5517. Western blot analysis of Nek4 expression in ES-2 (A), A-431 (B) and HeLa (C) whole cell lysates.



Nek4 (C-17): sc-5517. Western blot analysis of Nek4 expression in BT-20 (A) and ES-2 (B) whole cell lysates.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

**MONOS**  
Satisfaction  
Guaranteed

Try **Nek4 (2631C1a): sc-81332**, our highly recommended monoclonal alternative to Nek4 (C-17).