

Nek6 (N-15): sc-50754

BACKGROUND

NIMA was originally shown in *Aspergillus nidulans* to be necessary for entry into mitosis. NIMA-related mammalian proteins have since been identified as Nek1-4 and Nek6-9. High expression of Nek1 is seen in male and female germ cell lines of mice. Nek2 is the closest known mammalian relative to NIMA. Like NIMA, Nek2 expression peaks at the G₂ to M phase transition. Nek3, Nek6, Nek7 and Nek9 also regulate mitosis. Nek1 and Nek8 have been linked with polycystic kidney disease, and Nek4 expression is present in most primary carcinomas. Nek6 localizes to the cytoplasm and is expressed ubiquitously, with highest expression observed in the heart and skeletal muscle. It is activated during M phase and is required for chromosome segregation at the metaphase-anaphase transition and, consequently, mitotic progression.

REFERENCES

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- Schultz, S.J., Fry, A.M., Sutterlin, C., Ried, T. and Nigg, E.A. 1994. Cell cycle-dependent expression of Nek2, a novel human protein kinase related to the NIMA mitotic regulator of *Aspergillus nidulans*. *Cell Growth Differ.* 5: 625-635.
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- Rhee, K. and Wolgemuth, D.J. 1997. The NIMA-related kinase 2, Nek2, is expressed in specific stages of the meiotic cell cycle and associates with meiotic chromosomes. *Development* 124: 2167-2177.
- Tanaka, K. and Nigg, E.A. 1999. Cloning and characterization of the murine Nek3 protein kinase, a novel member of the NIMA family of putative cell cycle regulators. *J. Biol. Chem.* 274: 13491-13497.

CHROMOSOMAL LOCATION

Genetic locus: NEK6 (human) mapping to 9q33.3; Nek6 (mouse) mapping to 2 B.

SOURCE

Nek6 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Nek6 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-50754 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

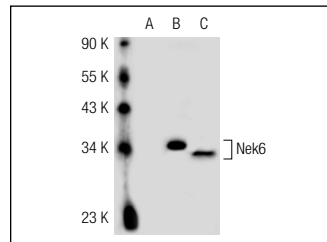
Nek6 (N-15) is recommended for detection of Nek6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Nek6 siRNA (h): sc-61172, Nek6 siRNA (m): sc-61173, Nek6 shRNA Plasmid (h): sc-61172-SH, Nek6 shRNA Plasmid (m): sc-61173-SH, Nek6 shRNA (h) Lentiviral Particles: sc-61172-V and Nek6 shRNA (m) Lentiviral Particles: sc-61173-V.

Molecular Weight of Nek6: 36 kDa.

Positive Controls: Nek6 (m): 293T Lysate: sc-127216 or Hep G2 nuclear extract: sc-364819.

DATA



Nek6 (N-15): sc-50754. Western blot analysis of Nek6 expression in non-transfected: sc-117752 (A) and mouse Nek6 transfected: sc-127216 (B) 293T whole cell lysates and Hep G2 nuclear extract (C).

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.



Try **Nek6 (D-7): sc-374491** or **Nek6 (A-6): sc-393837**, our highly recommended monoclonal alternatives to Nek6 (N-15).