**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 G2 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 G0-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.

**CHROMOSOMAL LOCATION**

Genetic locus: NEK2 (human) mapping to 1q32.3; Nek2 (mouse) mapping to 1 H6.

**SOURCE**

Nek2 (D-8) is a mouse monoclonal antibody raised against amino acids 211-445 mapping at the C-terminus of Nek2 of human origin.

**PRODUCT**

Each vial contains 200 μg IgGκ light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nek2 (D-8) is available conjugated to agarose (sc-55601 AC), 500 μg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-55601 HRP), 200 μg/ml, for WB, IHC and ELISA; and to either phycoerythrin (sc-55601 PE), fluorescein (sc-55601 FITC), Alexa Fluor® 488 (sc-55601 AF488) or Alexa Fluor® 647 (sc-55601 AF647), 200 μg/ml, for IF, IHC and FCM.

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**APPLICATIONS**

Nek2 (D-8) is recommended for detection of Nek2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

Suitable for use as control antibody for Nek2 siRNA (h): sc-43960, Nek2 siRNA (m): sc-44876, Nek2 shRNA Plasmid (h): sc-43960-SH, Nek2 shRNA Plasmid (m): sc-44876-SH, Nek2 shRNA (h) Lentiviral Particles: sc-43960-V and Nek2 shRNA (m) Lentiviral Particles: sc-44876-V.

Molecular Weight of Nek2: 47 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or KNRK whole cell lysate: sc-2214.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**DATA**

**SELECT PRODUCT CITATIONS**


**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.