

Nek9 (N-20): sc-50765

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. Nek9 [NIMA (never in mitosis gene a)-related kinase 9], also known as serine/threonine-protein kinase Nek9, NERCC, NERCC1, MGC16714, MGC138306 or DKFZp434D0935, is a 979 amino acid protein that localizes to cytoplasm and nucleus. Highly expressed in liver, heart, kidney and testis, Nek9 is also expressed at lower levels in fibroblasts and smooth muscle cells. Nek9 regulates G₁/S transition and S phase progression by influencing spindle dynamics and chromosome separation. Nek9 phosphorylates different histones (Histone H3 on serine and threonine), myelin basic protein, β -casein (serine) and BICD2. Nek9 interacts with Ran GTPase, Nek6, Nek7, BICD2, SSRP1 and SUPT16H/FACT complex.

CHROMOSOMAL LOCATION

Genetic locus: NEK9 (human) mapping to 14q24.3; Nek9 (mouse) mapping to 12 D2.

SOURCE

Nek9 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Nek9 of human origin.

PRODUCT

Each vial contains 100 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-50765 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Nek9 (N-20) is recommended for detection of Nek9 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).

Suitable for use as control antibody for Nek9 siRNA (h): sc-61178, Nek9 siRNA (m): sc-61179, Nek9 shRNA Plasmid (h): sc-61178-SH, Nek9 shRNA Plasmid (m): sc-61179-SH, Nek9 shRNA (h) Lentiviral Particles: sc-61178-V and Nek9 shRNA (m) Lentiviral Particles: sc-61179-V.

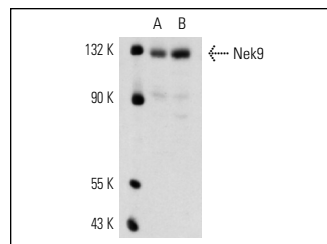
Molecular Weight of Nek9: 120 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, SK-N-MC nuclear extract: sc-2154b or HeLa whole cell lysate: sc-2200.

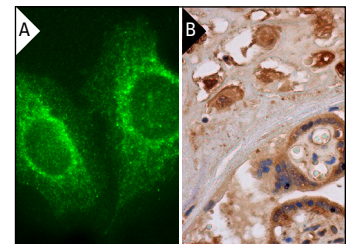
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Nek9 (N-20): sc-50765. Western blot analysis of Nek9 expression in SK-N-MC whole cell lysate (A) and SK-N-MC nuclear extract (B).



Nek9 (N-20): sc-50765. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells and decidual cells (B).

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 **Nek9 (39-7): sc-100401**, our highly recommended monoclonal alternative to Nek9 (N-20).