

Nek9 (m): 293T Lysate: sc-122002

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.

REFERENCES

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3. O'Connell, M.J., et al. 2003. Never say never. The NIMA-related protein kinases in mitotic control. *Trends Cell Biol.* 13: 221-228.
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CHROMOSOMAL LOCATION

Genetic locus: Nek9 (mouse) mapping to 12 D2.

PRODUCT

Nek9 (m): 293T Lysate represents a lysate of mouse Nek9 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

Nek9 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Nek9 antibodies. Recommended use: 10-20 μ l per lane.

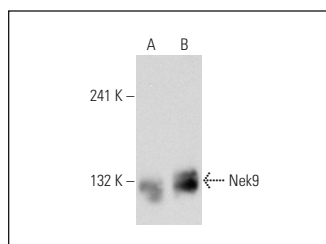
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Nek9 (39-7): sc-100401 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Nek9 expression in Nek9 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Nek9 (39-7): sc-100401. Western blot analysis of Nek9 expression in non-transfected: sc-117752 (A) and mouse Nek9 transfected: sc-122002 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.