

Nek10 (D-17): sc-103067

BACKGROUND

NIMA was originally discovered in *Aspergillus nidulans* as a protein that is necessary for entry into mitosis. Several NIMA-related mammalian proteins have since been identified. Nek10 (NIMA (never in mitosis gene a)-related kinase 10) is a 712 amino acid protein belonging to the NIMA subfamily of kinases and functions as a magnesium-dependent serine/threonine protein kinase. Kinases of the NIMA subfamily are typically involved in genotoxic stress response and DNA replication. Nek10 is expressed in brain and may contain a 14-3-3 interaction motif in its C-terminus. The gene encoding Nek10 has been localized to a region on chromosome 3 that may contribute to vulnerability to addictions. Due to alternative splicing events, three isoforms exist for Nek10.

REFERENCES

- Hanks, S.K. 2003. Genomic analysis of the eukaryotic protein kinase superfamily: a perspective. *Genome Biol.* 4: 111.
- Caenepeel, S., et al. 2004. The mouse kinome: discovery and comparative genomics of all mouse protein kinases. *Proc. Natl. Acad. Sci. USA* 101: 11707-11712.
- Roig, J., et al. 2005. Active Nercc1 protein kinase concentrates at centrosomes early in mitosis and is necessary for proper spindle assembly. *Mol. Biol. Cell* 16: 4827-4840.
- Cloutier, M., et al. 2005. Characterization of a poplar NIMA-related kinase PNek1 and its potential role in meristematic activity. *FEBS Lett.* 579: 4659-4665.
- Parker, J.D., et al. 2007. Phylogenetic analysis of the neks reveals early diversification of ciliary-cell cycle kinases. *PLoS ONE* 2: e1076.
- O'Regan, L., et al. 2007. Mitotic regulation by NIMA-related kinases. *Cell Div.* 2: 25.

CHROMOSOMAL LOCATION

Genetic locus: NEK10 (human) mapping to 3p24.1; Nek10 (mouse) mapping to 14 A2.

SOURCE

Nek10 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Nek10 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-103067 P, (100 µg 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

Nek10 (D-17) is recommended for detection of Nek10 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); non cross-reactive with other Nek family members.

Nek10 (D-17) is also recommended for detection of Nek10 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Nek10 siRNA (h): sc-78343, Nek10 siRNA (m): sc-149903, Nek10 shRNA Plasmid (h): sc-78343-SH, Nek10 shRNA Plasmid (m): sc-149903-SH, Nek10 shRNA (h) Lentiviral Particles: sc-78343-V and Nek10 shRNA (m) Lentiviral Particles: sc-149903-V.

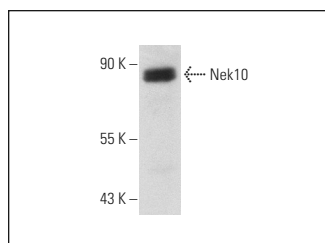
Molecular Weight of Nek10: 82 kDa.

Positive Controls: mouse brain extract: sc-2253.

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) 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



Nek10 (D-17): sc-103067. Western blot analysis of Nek10 expression in mouse brain tissue extract.

RESEARCH USE

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

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Try **Nek10 (97.1): sc-100434**, our highly recommended monoclonal alternative to Nek10 (D-17).