

NAP125 (N-12): sc-161124

BACKGROUND

NAP125, also known as NCKAP1 (NCK-associated protein 1), p125Nap1 or membrane-associated protein HEM2, is a 1,128 amino acid single-pass membrane protein that exists as 2 alternatively spliced isoforms and belongs to the HEM1/HEM2 family. While widely expressed, NAP125 is found at highest levels in heart, brain and skeletal muscle where it regulates Rac-dependent Actin remodeling as part of a lamellipodial complex with WAVE2, Abi-1 and CYFIP1. NAP125 localizes to the cytoplasmic side of lamellipodium membrane and is encoded by a gene that maps to human chromosome 2q32.1 and mouse chromosome 2 C3. NAP125 expression is markedly reduced in Alzheimer disease (AD)-affected brains, suggesting a possible role in the disease.

REFERENCES

1. Kitamura, Y., et al. 1997. Interaction of Nck-associated protein 1 with activated GTP-binding protein Rac. *Biochem. J.* 322: 873-878.
2. Suzuki, T., et al. 2000. Molecular cloning of a novel apoptosis-related gene, human Nap1 (NCKAP1), and its possible relation to Alzheimer disease. *Genomics* 63: 246-254.
3. Yamamoto, A., et al. 2001. Isolation of hNap1BP which interacts with human Nap1 (NCKAP1) whose expression is down-regulated in Alzheimer's disease. *Gene* 271: 159-169.
4. Eden, S., et al. 2002. Mechanism of regulation of WAVE1-induced Actin nucleation by Rac 1 and Nck. *Nature* 418: 790-793.
5. Steffen, A., et al. 2004. Sra-1 and Nap1 link Rac to Actin assembly driving lamellipodia formation. *EMBO J.* 23: 749-759.
6. Innocenti, M., et al. 2004. Abi-1 is essential for the formation and activation of a WAVE2 signalling complex. *Nat. Cell Biol.* 6: 319-327.
7. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 604891. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NCKAP1 (human) mapping to 2q32.1; Nckap1 (mouse) mapping to 2 C3.

SOURCE

NAP125 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NAP125 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-161124 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NAP125 (N-12) is recommended for detection of NAP125 of human origin and Nap1 of mouse 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), 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); non cross-reactive with NAP5.

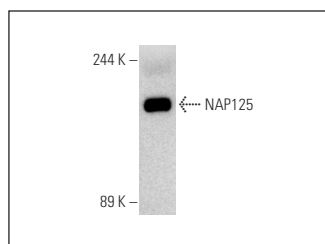
NAP125 (N-12) is also recommended for detection of NAP125 in additional species, including avian.

Suitable for use as control antibody for NAP125 siRNA (h): sc-94668, Nap1 siRNA (m): sc-149823, NAP125 shRNA Plasmid (h): sc-94668-SH, Nap1 shRNA Plasmid (m): sc-149823-SH, NAP125 shRNA (h) Lentiviral Particles: sc-94668-V and Nap1 shRNA (m) Lentiviral Particles: sc-149823-V.

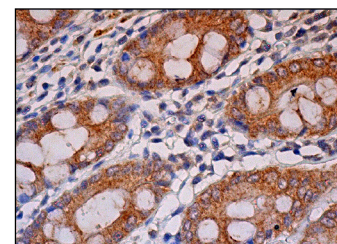
Molecular Weight of NAP125: 129 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188.

DATA



NAP125 (N-12): sc-161124. Western blot analysis of NAP125 expression in C2C12 whole cell lysate.



NAP125 (N-12): sc-161124. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

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 or our catalog for detailed protocols and support products.