

NECAP 1 (C-12): sc-161930

BACKGROUND

Clathrin-coated vesicles (CCVs) select cargo for endocytotic entry into cells and generate carrier vesicles for transport between the endosomal system and *trans*-Golgi network (TGN). NECAP 1 and NECAP 2 are essential protein paralogues for clathrin-mediated membrane trafficking that are enriched in CCV coats. NECAP 1 (NECAP endocytosis associated 1), also known as adaptin ear-binding coat-associated protein 1, is a 275 amino acid cell membrane protein belonging to the NECAP family that localizes to the clathrin-coated vesicle membrane. NECAP 1 is encoded by a gene that maps to human chromosome 12p13.31 and contains two WXXF motifs which are used to mediate binding of accessory proteins to ear domains of various proteins such as AP-1, AP-2 and GGAs. Expressed primarily in brain and existing as two alternatively spliced isoforms, NECAP 1 colocalizes with AP-2 at the plasma membrane by binding AP-2s α -ear domain.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611623. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Ritter, B., Philie, J., Girard, M., Tung, E.C., Blondeau, F. and McPherson, P.S. 2003. Identification of a family of endocytic proteins that define a new α -Adaptin ear-binding motif. *EMBO Rep.* 4: 1089-1095.
3. Ritter, B., Blondeau, F., Denisov, A.Y., Gehring, K. and McPherson, P.S. 2004. Molecular mechanisms in clathrin-mediated membrane budding revealed through subcellular proteomics. *Biochem. Soc. Trans.* 32: 769-773.
4. Mattera, R., Ritter, B., Sidhu, S.S., McPherson, P.S. and Bonifacino, J.S. 2004. Definition of the consensus motif recognized by γ -adaptin ear domains. *J. Biol. Chem.* 279: 8018-8028.
5. McPherson, P.S. and Ritter, B. 2005. Peptide motifs: building the clathrin machinery. *Mol. Neurobiol.* 32: 73-87.

CHROMOSOMAL LOCATION

Genetic locus: NECAP1 (human) mapping to 12p13.31; Necap1 (mouse) mapping to 6 F2.

SOURCE

NECAP 1 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NECAP 1 of human origin.

PRODUCT

Each vial contains 200 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-161930 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

NECAP 1 (C-12) is recommended for detection of NECAP 1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with NECAP 2.

Suitable for use as control antibody for NECAP 1 siRNA (h): sc-95850, NECAP 1 siRNA (m): sc-149896, NECAP 1 shRNA Plasmid (h): sc-95850-SH, NECAP 1 shRNA Plasmid (m): sc-149896-SH, NECAP 1 shRNA (h) Lentiviral Particles: sc-95850-V and NECAP 1 shRNA (m) Lentiviral Particles: sc-149896-V.

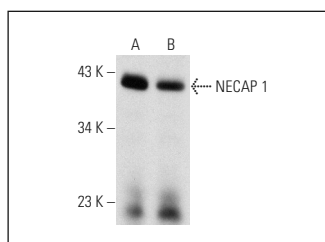
Molecular Weight of NECAP 1: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse cerebellum extract: sc-2403 or 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) 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.

DATA



NECAP 1 (C-12): sc-161930. Western blot analysis of NECAP 1 expression in mouse brain (A) and mouse cerebellum (B) tissue extracts.

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.