

NECAP 2 (I-11): sc-160075

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 2 (NECAP endocytosis associated 2), also known as adaptin ear-binding coat-associated protein 2, is a 263 amino acid protein belonging to the NECAP family that localizes to the clathrin-coated vesicle membrane. NECAP 2 is encoded by a gene that maps to human chromosome 1p36.13 and exists as three alternatively spliced isoforms. NECAP 2 colocalizes with AP-2 at the plasma membrane by binding AP-2s α -ear domain, and interacts with AP-1, AP-2 and several GAE domain proteins termed GGA1, GGA2 and GGA3.

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: NECAP2 (human) mapping to 1p36.13; Necap2 (mouse) mapping to 4 D3.

SOURCE

NECAP 2 (I-11) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NECAP 2 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-160075 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 2 (I-11) is recommended for detection of NECAP 2 isoforms 1-3 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 1.

NECAP 2 (I-11) is also recommended for detection of NECAP 2 isoforms 1-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NECAP 2 siRNA (h): sc-78871, NECAP 2 siRNA (m): sc-149897, NECAP 2 shRNA Plasmid (h): sc-78871-SH, NECAP 2 shRNA Plasmid (m): sc-149897-SH, NECAP 2 shRNA (h) Lentiviral Particles: sc-78871-V and NECAP 2 shRNA (m) Lentiviral Particles: sc-149897-V.

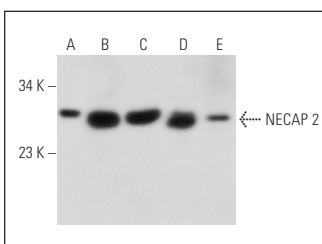
Molecular Weight of NECAP 2: 28 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, PC-12 cell lysate: sc-2250 or rat liver extract: sc-2395.

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 2 (I-11): sc-160075. Western blot analysis of NECAP 2 expression in KNRK (A), SH-SY5Y (B) and PC-12 (C) whole cell lysates and rat liver (D) and rat lung (E) 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.