SANTA CRUZ BIOTECHNOLOGY, INC.

APBA2BP (E-16): sc-85271

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

APBA2BP (β-amyloid A4 protein-binding family A member 2-binding protein), also known as NECAB3 (N-terminal EF-hand calcium-binding protein 3), NIP1, SYTIP2 or XB51, is a 396 amino acid protein that localizes to the perinuclear region of the cytoplasm and contains one calcium binding EF-hand domain and one ABM domain. Highly expressed in skeletal muscle and heart with lower expression in pancreas and brain, APBA2BP functions to interact with and inhibit the association of X11β with the β-amyloid precursor protein, thereby allowing the formation of mature β-amyloid via a non-competitive mechanism. Due to its role in β-amyloid production, APBA2BP is thought to be an essential factor in β-amyloid regulatory events and may contribute to the pathogenesis of Alzheimer's disease. Three isoforms of APBA2BP exist as a result of alternative splicing events.

REFERENCES

1. Büssow, K., et al. 1998. A method for global protein expression and antibody screening on high-density filters of an arrayed cDNA library. Nucleic Acids Res. 26: 5007-5008.
2. Sugita, S. and Südhof, T.C. 2000. Specificity of Ca^{2+}-dependent protein interactions mediated by the C2A domains of synaptotagmins. Biochemistry 39: 2940-2949.
3. Lee, D.S., et al. 2000. Regulation of X11L-dependent amyloid precursor protein metabolism by XB51, a novel X11L-binding protein. J. Biol. Chem. 275: 23134-23138.
4. Sugita, S., et al. 2002. NECABs: a family of neuronal Ca^{2+}-binding proteins with an unusual domain structure and a restricted expression pattern. Neuroscience 112: 51-63.
5. Sumioka, A., et al. 2003. XB51 isoforms mediate Alzheimer's β-amyloid peptide production by X11L (X11-like protein)-dependent and -independent mechanisms. Biochem. J. 374: 261-268.

CHROMOSOMAL LOCATION

Genetic locus: NECAB3 (human) mapping to 20q11.22; Necab3 (mouse) mapping to 2 H1.

SOURCE

APBA2BP (E-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of APBA2BP of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85271 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

APBA2BP (E-16) is recommended for detection of APBA2BP 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).

APBA2BP (E-16) is also recommended for detection of APBA2BP in additional species, including equine and porcine.

Suitable for use as control antibody for APBA2BP siRNA (h): sc-72511, APBA2BP siRNA (m): sc-141144, APBA2BP shRNA Plasmid (h): sc-72511-SH, APBA2BP shRNA Plasmid (m): sc-141144-SH, APBA2BP shRNA (h) Lentiviral Particles: sc-72511-V and APBA2BP shRNA (m) Lentiviral Particles: sc-141144-V.

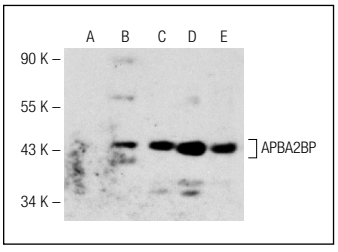
Molecular Weight of APBA2BP isoforms: 41/44/22 kDa.

Positive Controls: APBA2BP (h): 293T Lysate: sc-116083, PC-12 cell lysate: sc-2250 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



APBA2BP (E-16): sc-85271. Western blot analysis of APBA2BP expression in non-transfected 293T: sc-117752 (**A**), human APBA2BP transfected 293T: sc-116083 (**B**), PC-12 (**C**), C2C12 (**D**) and HeLa (**E**) whole cell lysates.

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.