

APBA2BP (A-2): sc-376656

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 X11 β 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

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- 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.
- Yoo, J.C., et al. 2004. NIP1/XB51/NECAB3 is a potential substrate of Nek2, suggesting specific roles of Nek2 in Golgi. *Exp. Cell Res.* 292: 393-402.
- Wu, H., et al. 2007. EFCBP1/NECAB1, a brain-specifically expressed gene with highest abundance in temporal lobe, encodes a protein containing EF-hand and antibiotic biosynthesis monooxygenase domains. *DNA Seq.* 18: 73-79.

CHROMOSOMAL LOCATION

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

SOURCE

APBA2BP (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 67-101 within an internal region of APBA2BP of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376656 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

APBA2BP (A-2) is recommended for detection of APBA2BP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

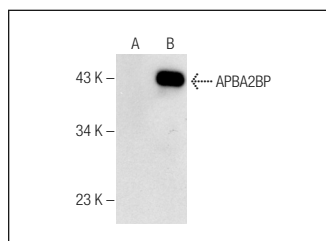
Molecular Weight of APBA2BP isoforms: 41/44/22 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



APBA2BP (A-2): sc-376656. Western blot analysis of APBA2BP expression in non-transfected: sc-117752 (A) and human APBA2BP transfected: sc-116083 (B) 293T whole cell lysates.

RESEARCH USE

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