

APBA1 Antibody

Catalog # ASC11506

Product Information

Application	WB, IF, E
Primary Accession	Q02410
Other Accession	NP_001154 , 22035548
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	92865
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	APBA1 antibody can be used for detection of APBA1 by Western blot at 0.5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	320
Other Names	Amyloid beta A4 precursor protein-binding family A member 1, Adapter protein X11alpha, Neuron-specific X11 protein, Neuronal Munc18-1-interacting protein 1, Mint-1, APBA1, MINT1, X11
Target/Specificity	APBA1; At least two alternatively spliced isoforms are known to exist; this antibody will detect both isoforms. This antibody is predicted to not cross-react with other APBA proteins.
Reconstitution & Storage	APBA1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	APBA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	APBA1
Synonyms	MINT1, X11
Function	Putative function in synaptic vesicle exocytosis by binding to Munc18-1, an essential component of the synaptic vesicle exocytotic machinery. May modulate processing of the amyloid-beta precursor protein (APP) and hence formation of APP-beta. Component of the LIN-10- LIN-2-LIN-7 complex, which associates with the motor protein KIF17 to transport vesicles containing

N-methyl-D-aspartate (NMDA) receptor subunit NR2B along microtubules (By similarity).

Cellular Location

Cytoplasm. Cytoplasm, perinuclear region. Nucleus. Note=Only about 5% of the protein is located in the nucleus

Tissue Location

Brain and spinal cord. Isoform 2 is expressed in testis and brain, but not detected in lung, liver or spleen

Background

APBA1 Antibody: The Amyloid beta 4 (A4) precursor protein-binding family A member 1 (APBA1) is a member of the X11 protein family and a neuronal adapter protein that interacts with the Alzheimer's disease amyloid precursor protein (APP). APBA1 stabilizes APP and inhibits production of proteolytic APP fragments including the A β peptide that is deposited in the brains of Alzheimer's disease patients. It is thought to be involved in signal transduction processes and is a putative vesicular trafficking protein in the brain that can form a complex with the potential to couple synaptic vesicle exocytosis to neuronal cell adhesion. APBA1 can also bind to CASK, a multidomain scaffolding protein involved in brain development and synapse formation.

References

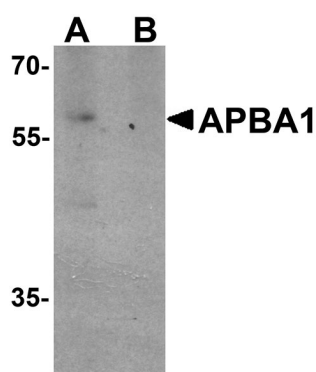
Borg JP, Ooi J, Levy E, et al. The phosphotyrosine interaction domains of X11 and FE65 bind to distinct sites on the YENPTY motif of amyloid precursor protein. *Mol. Cell. Biol.* 1996; 16:6229-41.

Mueller HT, Borg JP, Margolis B, et al. Modulation of amyloid precursor protein metabolism by X11alpha/Mint1. A deletion analysis of protein-protein interaction domains. *J. Biol. Chem.* 2000; 275:39302-6.

Maximov A, Sudhof TC, and Bezprozvanny I. Association of neuronal calcium channels with modular adaptor proteins. *J. Biol. Chem.* 1999; 274:24453-6

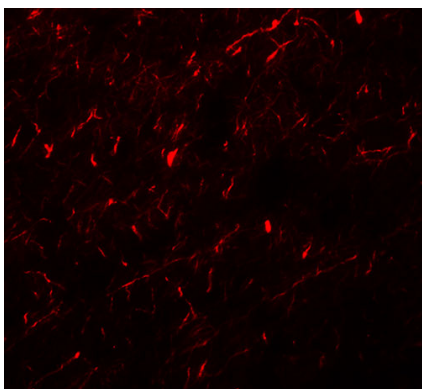
Stafford RL, Ear J, Knight MJ, et al. The molecular basis of the Caskin1 and Mint1 interaction with CASK. *J. Mol. Biol.* 2011; 412:3-13.

Images



Western blot analysis of APBA1 in rat brain tissue lysate with APBA1 antibody at 0.5 μ g/ml in (A) the absence and (B) the presence of blocking peptide.

Immunofluorescence of APBA1 in human brain tissue with APBA1 antibody at 20 μ g/mL.



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