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NAE1 (APPBP1) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7273b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13564
Other Accession	Q9Z1A5, Q8VBW6, Q4R3L6, NP_003896
Reactivity	Human
Predicted	Monkey, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB8977
Calculated MW	60246
Antigen Region	430-459

Additional Information

Gene ID	8883
Other Names	NEDD8-activating enzyme E1 regulatory subunit, Amyloid beta precursor protein-binding protein 1, 59 kDa, APP-BP1, Amyloid protein-binding protein 1, Proto-oncogene protein 1, NAE1, APPBP1
Target/Specificity	This NAE1 (APPBP1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 430-459 amino acids from the C-terminal region of human NAE1 (APPBP1).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NAE1 (APPBP1) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NAE1
Synonyms	APPBP1

Function	Regulatory subunit of the dimeric UBA3-NAE1 E1 enzyme. E1 activates NEDD8 by first adenylating its C-terminal glycine residue with ATP, thereafter linking this residue to the side chain of the catalytic cysteine, yielding a NEDD8-UBA3 thioester and free AMP. E1 finally transfers NEDD8 to the catalytic cysteine of UBE2M. Necessary for cell cycle progression through the S-M checkpoint. Overexpression of NAE1 causes apoptosis through deregulation of NEDD8 conjugation. The covalent attachment of NEDD8 to target proteins is known as 'neddylation' and the process is involved in the regulation of cell growth, viability and development.
Cellular Location	Cell membrane. Note=Colocalizes with APP in lipid rafts
Tissue Location	Ubiquitous in fetal tissues. Expressed throughout the adult brain.

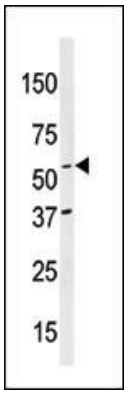
Background

APPBP1 binds to the beta-amyloid precursor protein, a cell surface protein with signal-transducing properties thought to play a role in the pathogenesis of Alzheimer's disease. In addition, this protein can form a heterodimer with UBE1C and bind and activate NEDD8, a ubiquitin-like protein. APPB1 is required for cell cycle progression through the S/M checkpoint.

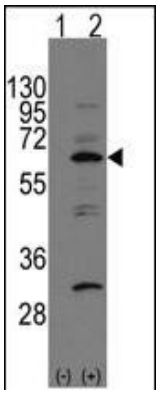
References

Chen,Y., J. Cell Biol. 163 (1), 27-33 (2003)
Chen,Y., J. Neurochem. 85 (3), 801-809 (2003)
Walden,H., Nature 422 (6929), 330-334 (2003)
Chow,N., J. Biol. Chem. 271 (19), 11339-11346 (1996)

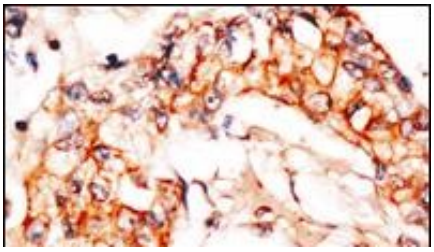
Images



Western blot analysis of anti-APPBP1 Antibody (C-term) (Cat.#AP7273b) in mouse brain tissue lysates (35ug/lane). APPBP1(arrow) was detected using the purified Pab.



Western blot analysis of APP-BP1(arrow) using rabbit polyclonal APP-BP1 Antibody (C-term) (Cat.#AP7273b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the APP-BP1 gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human breast carcinoma reacted with anti-APPBP1 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.