10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NAE1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13067c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13564
Other Accession	Q9Z1A5, Q4R3L6, NP_001018170.1, NP_003896.1
Reactivity	Human
Predicted	Monkey, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33003
Calculated MW	60246
Antigen Region	172-200

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 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 172-200 amino acids from the Central region of human NAE1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 Antibody (Center) 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

The protein encoded by this gene binds to the beta-amyloid precursor protein. Beta-amyloid precursor protein is a cell surface protein with signal-transducing properties, and it is thought to play a role in the pathogenesis of Alzheimer's disease. In addition, the encoded protein can form a heterodimer with UBE1C and bind and activate NEDD8, a ubiquitin-like protein. This protein is required for cell cycle progression through the S/M checkpoint. Three transcript variants encoding different isoforms have been found for this gene.

References

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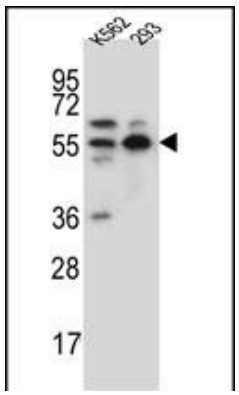
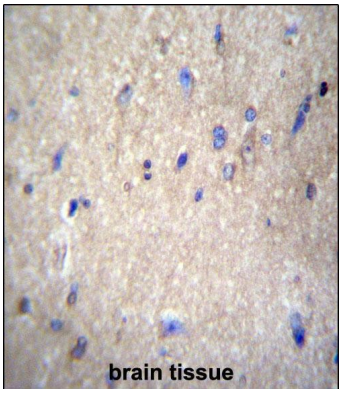
Park, Y., et al. Biochem. Biophys. Res. Commun. 374(2):294-298(2008)
Ewing, R.M., et al. Mol. Syst. Biol. 3, 89 (2007) :
Li, T., et al. Arch. Biochem. Biophys. 453(1):70-74(2006)
Norman, J.A., et al. Biochemistry 45(9):3014-3019(2006)

Images



NAE1 Antibody (Center) (Cat. #AP13067c) western blot analysis in K562,293 cell line lysates (35ug/lane).This demonstrates the NAE1 antibody detected the NAE1 protein (arrow).

NAE1 Antibody (Center) (Cat. #AP13067c)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of NAE1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



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