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

CDK5R1(p35) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7743b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q15078
Other Accession	P61810, P61809, Q28199
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36667
Calculated MW	34060
Antigen Region	272-301

Additional Information

Gene ID	8851
Other Names	Cyclin-dependent kinase 5 activator 1, CDK5 activator 1, Cyclin-dependent kinase 5 regulatory subunit 1, TPKII regulatory subunit, Cyclin-dependent kinase 5 activator 1, p35, p35, Cyclin-dependent kinase 5 activator 1, p25, p25, Tau protein kinase II 23 kDa subunit, p23, CDK5R1, CDK5R, NCK5A
Target/Specificity	This CDK5R1(p35) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 272-301 amino acids from the C-terminal region of human CDK5R1(p35).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	CDK5R1(p35) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDK5R1

Synonyms	CDK5R, NCK5A
Function	p35 is a neuron specific activator of CDK5. The complex p35/CDK5 is required for neurite outgrowth and cortical lamination. Involved in dendritic spine morphogenesis by mediating the EFNA1-EPHA4 signaling. Activator of TPKII. The complex p35/CDK5 participates in the regulation of the circadian clock by modulating the function of CLOCK protein: phosphorylates CLOCK at 'Thr-451' and 'Thr-461' and regulates the transcriptional activity of the CLOCK-BMAL1 heterodimer in association with altered stability and subcellular distribution.
Cellular Location	[Cyclin-dependent kinase 5 activator 1, p35]: Cell membrane; Lipid-anchor; Cytoplasmic side. Cell projection, neuron projection. Note=In the primary cortical neurons, p35 is present in the peripheries and nerve terminals.
Tissue Location	Brain and neuron specific.

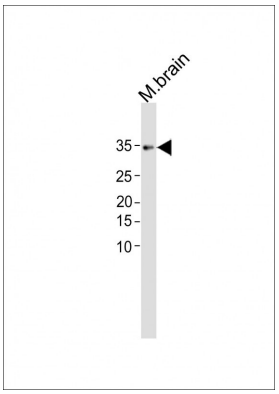
Background

p35 is a neuron-specific activator of cyclin-dependent kinase 5 (CDK5); the activation of CDK5 is required for proper development of the central nervous system. The p35 form of this protein is proteolytically cleaved by calpain, generating a p25 form. The cleavage of p35 into p25 results in relocalization of the protein from the cell periphery to nuclear and perinuclear regions. P25 deregulates CDK5 activity by prolonging its activation and changing its cellular location. The p25 form accumulates in the brain neurons of patients with Alzheimer's disease. This accumulation correlates with an increase in CDK5 kinase activity, and may lead to aberrantly phosphorylated forms of the microtubule-associated protein tau, which contributes to Alzheimer's disease.

References

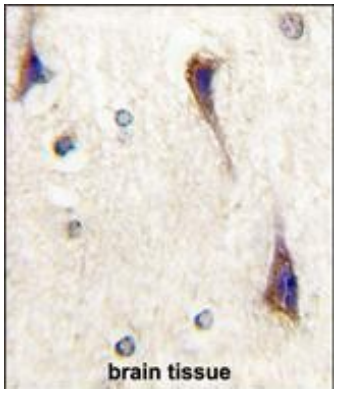
Lin,S., FEBS Lett. 582 (8), 1197-1202 (2008)
Sen,A., Neuroreport 18 (5), 511-516 (2007)
Mitsios,N., Brain Pathol. 17 (1), 11-23 (2007)

Images



All lanes: Anti-CDK5R1 Antibody (C-term) at 1:500 dilution + Mouse brain lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 34 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human brain tissue reacted with CDK5R1(p35) Antibody (C-term) (Cat.#AP7743b), 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.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.