

Product Name: p35 Rabbit Polyclonal Antibody
Catalog #: APRab15615



Summary

Production Name	p35 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IF, WB,
Reactivity	Human, Mouse, Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	CDK5R1
Alternative Names	CDK5R1; CDK5R; NCK5A; Cyclin-dependent kinase 5 activator 1; CDK5 activator 1; Cyclin-dependent kinase 5 regulatory subunit 1; TPKII regulatory subunit
Gene ID	8851.0
SwissProt ID	Q15078. The antiserum was produced against synthesized peptide derived from human CDK5R1. AA range:11-60

Application

Dilution Ratio	WB 1:500 - 1:2000. IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.
Molecular Weight	38kD

Background

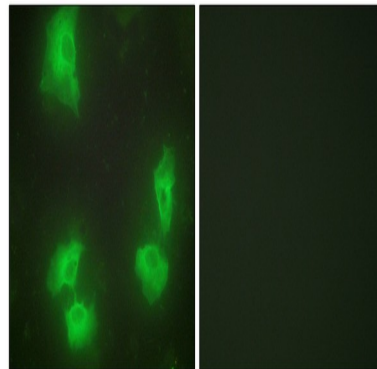
The protein encoded by this gene (p35) is a neuron-specific activator of cyclin-dependent kinase 5 (CDK5); the activation of CDK5 is required for proper development of the central nervous system. The p35 form of this protein is proteolytically cleaved by calpain, generating a p25 form. The cleavage of 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. [provided by RefSeq, Jul 2008],disease: Cleavage of p35 to p25 may be involved in the pathogenesis of Alzheimer disease. The p25 form accumulates in neurons in the brain of patients with Alzheimer disease, but not in normal brain. This accumulation correlates with an increase in CDK5 kinase activity. Application of amyloid beta peptide A-beta(1-42) induced the conversion of p35 to p25 in primary cortical neurons. Expression of the p25/Cdk5 complex in cultured primary neurons induces cytoskeletal disruption, morphological degeneration and apoptosis.,function: p35 is a neuron specific activator of CDK5. The complex p35/CDK5 is required for neurite outgrowth and cortical lamination. Activator of TPKII.,PTM: Probably myristoylated. The Gly-2-Ala mutant is absent of the cell periphery, suggesting that a proper myristoylation signal is essential for the proper distribution of p35.,PTM: The p35 form is proteolytically cleaved by calpain, giving rise to the p25 form. P35 has a 5 to 10 fold shorter half-life compared to p25. The conversion results in deregulation of the CDK5 kinase: p25/CDK5 kinase displays an increased and altered tau phosphorylation in comparison to the p35/CDK5 kinase in vivo.,similarity: Belongs to the cyclin-dependent kinase 5 activator family.,subcellular location: In the primary cortical neurons, p35 is present in the peripheries and nerve terminals.,subcellular location: The conversion of p35 to p25 relocalizes the protein from the cell periphery to the cytoplasm, in nuclear and perinuclear regions. In the primary cortical neurons, p25 is primarily concentrated in the cell soma and is largely absent from neurites.,subunit: Heterodimer composed of CDK5 and CDK5R (p25) and macromolecular complex composed of at least CDK5, CDK5R (p35) and CDK5RAP1 or CDK5RAP2 or CDK5RAP3. Only the heterodimer shows kinase activity (By similarity). Interacts with RASGRF2.,tissue specificity: Brain and neuron specific.,

Research Area

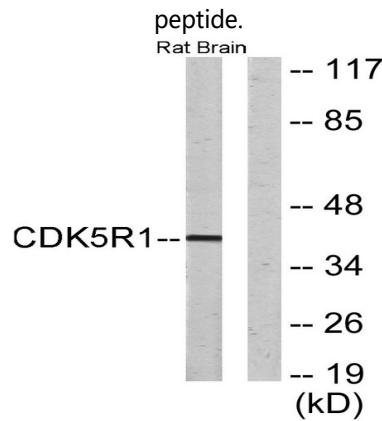
Alzheimer's disease;

Image Data

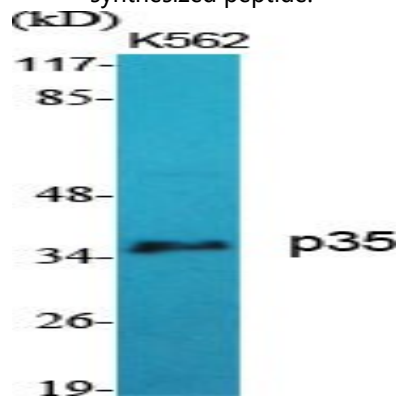
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Immunofluorescence analysis of HeLa cells, using CDK5R1 Antibody. The picture on the right is blocked with the synthesized

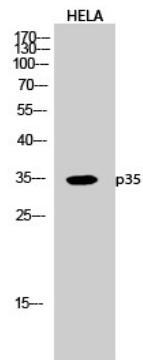


Western blot analysis of lysates from rat brain cells, using CDK5R1 Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using p35 Polyclonal Antibody diluted at 1: 1000

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Western Blot analysis of HELA cells using p35 Polyclonal Antibody diluted at 1: 1000

Note

For research use only.