



p35 Polyclonal Antibody

Catalog No	YP-Ab-16764
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB;IHC;IF;ELISA
Gene Name	CDK5R1
Immunogen	The antiserum was produced against synthesized peptide derived from human CDK5R1. AA range:11-60
Specificity	p35 Polyclonal Antibody detects endogenous levels of p35 protein.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	CD5R1_HUMAN;CDK5 activator 1;CDK5P35;CDK5R;CDK5R1;Cyclin dependent kinase 5 regulatory subunit 1;Cyclin-dependent kinase 5 activator 1; Cyclin-dependent kinase 5 regulatory subunit 1;NCK 5A;Neuronal CDK5 activator;p23;p25;p35;Regulatory partner for CDK5 kinase;Tau protein kinase II 23 kDa subunit;TPKII regulatory subunit;NCK5A
Observed Band	38kD
Calculated Molecular Weight	38kD
Cell Pathway	[Cyclin-dependent kinase 5 activator 1, p35]: Cell membrane ; Lipid-anchor ; Cytoplasmic side . Cell projection, neuron projection . In the primary cortical neurons, p35 is present in the peripheries and nerve terminals. .; [Cyclin-dependent kinase 5 activator 1, p25]: Nucleus . Cytoplasm, perinuclear region . Perikaryon . The conversion of p35 to p25 relocates the protein from the cell periphery to the cytoplasm, in nuclear and perinuclear regions (PubMed:18507738). In the primary cortical neurons, p25 is primarily concentrated in the cell soma and is largely absent from neurites (PubMed:18507738). .
Tissue Specificity	Brain and neuron specific.



Function

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

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],

matters needing attention

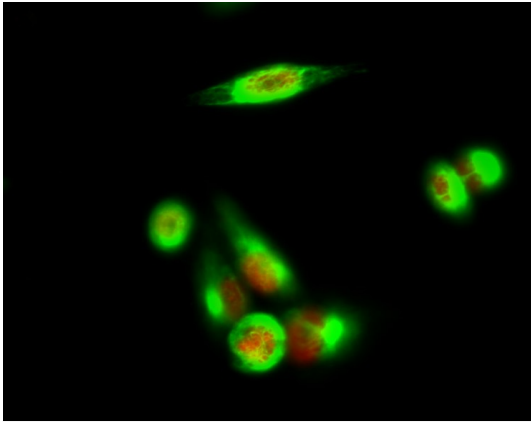
Avoid repeated freezing and thawing!

Usage suggestions

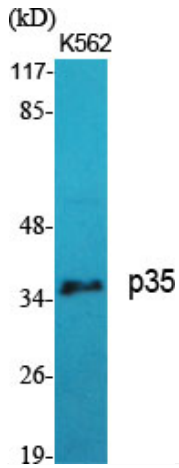
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



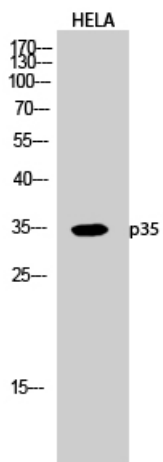
Products Images



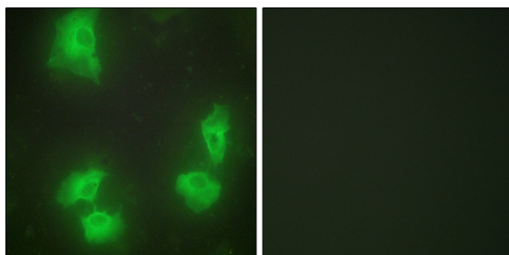
Immunofluorescence analysis of HeLa cell. 1, p35 Polyclonal Antibody (red) was diluted at 1:200 (4° overnight). Caspase 9 Monoclonal Antibody (3-20) (green) was diluted at 1:200 (4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog: RS3611 was diluted at 1:1000 (room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog: RS3208 was diluted at 1:1000 (room temperature, 50min).



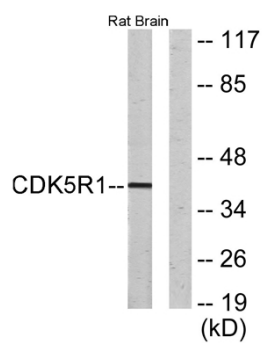
Western Blot analysis of various cells using p35 Polyclonal Antibody diluted at 1:1000



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



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



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