

ARG66698 anti-CDK5R1 / p35 antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes CDK5R1 / p35
Tested Reactivity	Hu, Rat
Predict Reactivity	Ms
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	CDK5R1 / p35
Species	Human
Immunogen	Synthetic peptide within aa. 30-110 of Human CDK5R1 / p35.
Conjugation	Un-conjugated
Alternate Names	CDK5 activator 1; CDK5R; TPKII regulatory subunit; Cyclin-dependent kinase 5 activator 1; NCK5A; p25; p23; Cyclin-dependent kinase 5 regulatory subunit 1; p35nck5a; Tau protein kinase II 23 kDa subunit; CDK5P35; p35

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:200 - 1:1000
	IHC-P	1:100 - 1:300
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	~ 35 kDa	

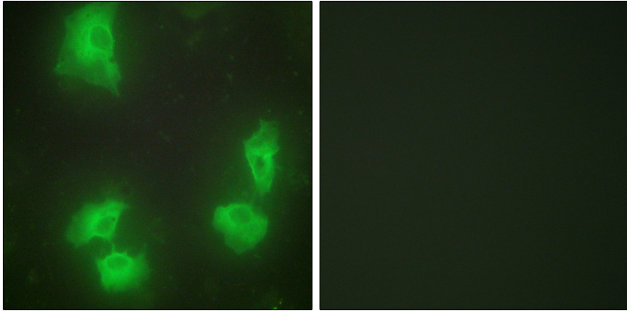
Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.02% Sodium azide, 50% Glycerol and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol and 0.5% BSA
Concentration	1 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

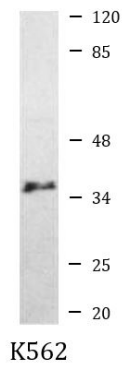
Bioinformation

Gene Symbol	CDK5R1
Gene Full Name	cyclin-dependent kinase 5, regulatory subunit 1 (p35)
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]
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-ARNTL/BMAL1 heterodimer in association with altered stability and subcellular distribution. [UniProt]
Calculated Mw	34 kDa
PTM	<p>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 (By similarity).</p> <p>Myristoylated. A proper myristoylation signal is essential for the proper distribution of p35.</p> <p>Ubiquitinated. Degradation of p35 by proteasome results in down-regulation of CDK5 activity. During this process, CDK5 phosphorylates p35 and induces its ubiquitination and subsequent degradation.</p> <p>Phosphorylation at Ser-8 and Thr-138 by CDK5 prevents calpain-mediated proteolysis. [UniProt]</p>
Cellular Localization	CDK5R1, p35: Cell membrane; Lipid-anchor; Cytoplasmic side. Note=In the primary cortical neurons, p35 is present in the peripheries and nerve terminals. CDK5R1, p25: Nucleus. Cytoplasm, perinuclear region. Note=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. [UniProt]



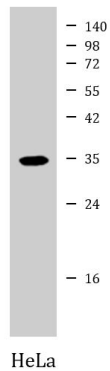
ARG66698 anti-CDK5R1 / p35 antibody ICC/IF image

Immunofluorescence: HeLa cells stained with ARG66698 anti-CDK5R1 / p35 antibody. The picture on the right is blocked with the synthetic peptide.



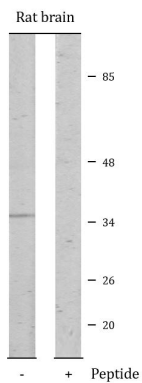
ARG66698 anti-CDK5R1 / p35 antibody WB image

Western blot: K562 cell lysate stained with ARG66698 anti-CDK5R1 / p35 antibody at 1:1000 dilution.



ARG66698 anti-CDK5R1 / p35 antibody WB image

Western blot: HeLa cell lysate stained with ARG66698 anti-CDK5R1 / p35 antibody at 1:1000 dilution.



ARG66698 anti-CDK5R1 / p35 antibody WB image

Western blot: Rat brain lysate stained with ARG66698 anti-CDK5R1 / p35 antibody. The lane on the right is blocked with the synthetic peptide.