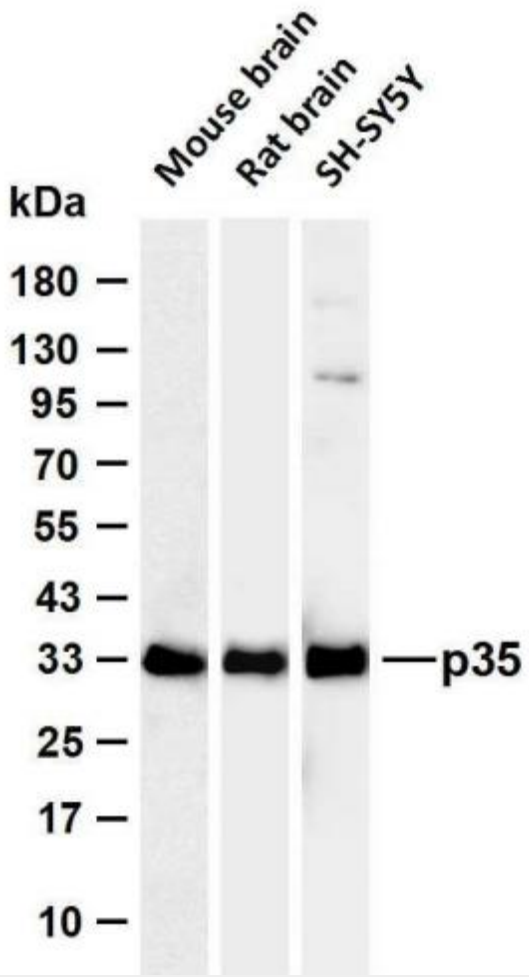
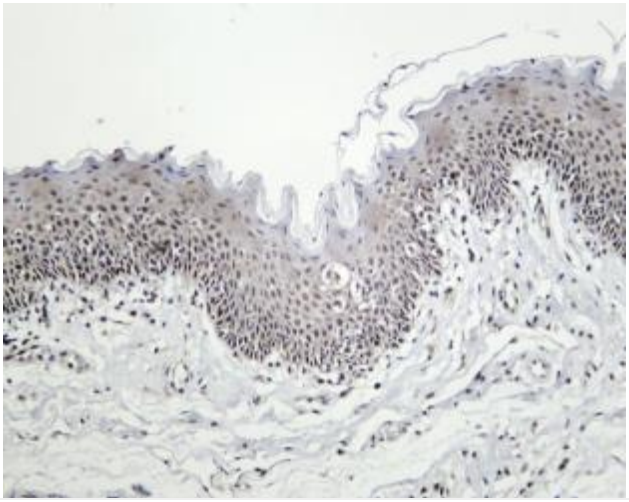
p35 Rabbit mAb

Catalog No	YP-rAb-16903
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,ELISA
Gene Name	CDK5R1
Protein Name	Cyclin-dependent kinase 5 activator 1
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/ 1 year(Do not lower than -25° C)
Synonyms	CDK5R1 ; CDK5R ; NCK5A ; Cyclin-dependent kinase 5 activator 1 ; CDK5 activator 1 ; Cyclin-dependent kinase 5 regulatory subunit 1 ; TPKII regulatory subunit ; [Cleaved into: Cyclin-dependent kinase 5 activator 1, p35 ; p35 ; Cyclin-dependent kinase 5 activator 1, p25 ; p25 ; Tau protein kinase II 23 kDa subunit ; p23 ;]
Observed Band	34kD
Calculated Molecular Weight	34kD
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 relocalizes 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 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.,
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.



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-p35 antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Mouse brain Lane 2: Rat brain Lane 3: SH-SY5Y Predicted band size: 34kDa Observed band size: 34kDa



Human tonsil was stained with anti-p35 Rabbit antibody