



CDK5 Rabbit mAb

Catalog No	YP-rAb-17214
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	CDK5 CDKN5
Protein Name	Cyclin-dependent kinase 5
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; IP 1:50-1:200; 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	CDK5 ; CDKN5 ; Cyclin-dependent kinase 5 ; Cell division protein kinase 5 ; Serine/threonine-protein kinase PSSALRE ; Tau protein kinase II catalytic subunit ; TPKII catalytic subunit
Observed Band	33kD
Calculated Molecular Weight	33kD
Cell Pathway	[Isoform 1]: Cytoplasm . Nucleus . Cell membrane ; Peripheral membrane protein . Perikaryon. Cell projection, lamellipodium . Cell projection, growth cone . Cell junction, synapse, postsynaptic density . Cell junction, synapse . In axonal growth cone with extension to the peripheral lamellipodia (By similarity). Under neurotoxic stress and neuronal injury conditions, CDK5R (p35) is cleaved by calpain to generate CDK5R1 (p25) in response to increased intracellular calcium. The elevated level of p25, when in complex with CDK5, leads to its subcellular misallocation as well as its hyperactivation. Colocalizes with CTNND2 in the cell body of neuronal cells, and with CTNNB1 in the cell-cell contacts and plasma membrane of undifferentiated and differentiated neuroblastoma cells. Reversibly attached to the plasma membrane in an inactive form when complexed to dephosphorylated p35 or CDK5R2 (p39), p35 phosphorylation releases this attachment and activates CDK5. .; [Isoform 2]: Nucleus.
Tissue Specificity	[Isoform 1]: Ubiquitously expressed (PubMed:17009320, PubMed:19693690) . Accumulates in cortical neurons (at protein level) (PubMed:17009320) . ; [Isoform 2]: Nucleus.





2]: Expressed in the testis, skeletal muscle, colon, bone marrow and ovary.

Function

Catalytic activity: ATP + a protein = ADP + a phosphoprotein. Function: Probably involved in the control of the cell cycle. Interacts with D1 and D3-type G1 cyclins. Can phosphorylate histone H1, tau, MAP2 and NF-H and NF-M. Also interacts with p35 which activates the kinase. similarity: Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily. similarity: Contains 1 protein kinase domain. subcellular location: In axonal growth cone with extension to the peripheral lamellipodia. subunit: Heterodimer of a catalytic subunit and a regulatory subunit (p35). Found in a trimolecular complex with CABLES1 and ABL1. Interacts with CABLES1 (By similarity). Interacts with AATK.

Background

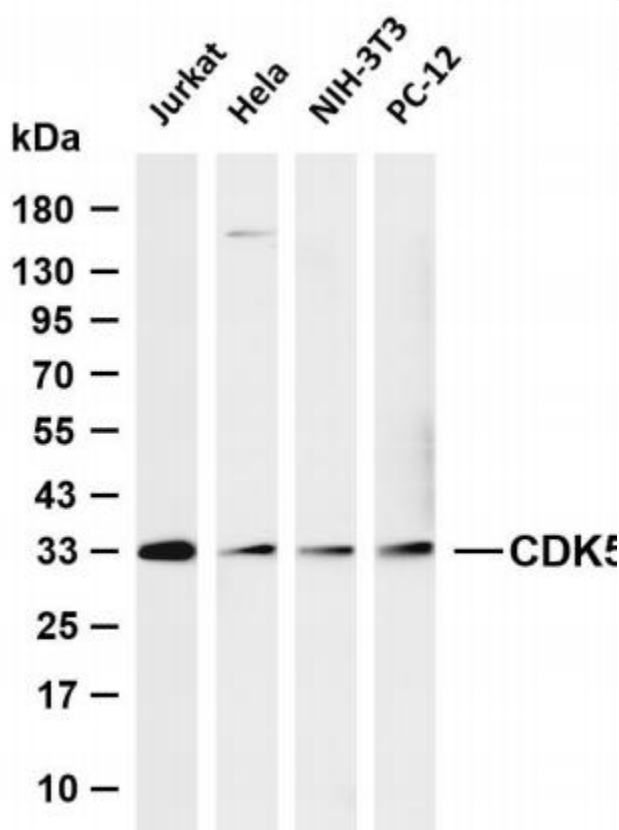
cyclin dependent kinase 5(CDK5) Homo sapiens This gene encodes a proline-directed serine/threonine kinase that is a member of the cyclin-dependent kinase family of proteins. Unlike other members of the family, the protein encoded by this gene does not directly control cell cycle regulation. Instead the protein, which is predominantly expressed at high levels in mammalian postmitotic central nervous system neurons, functions in diverse processes such as synaptic plasticity and neuronal migration through phosphorylation of proteins required for cytoskeletal organization, endocytosis and exocytosis, and apoptosis. In humans, an allelic variant of the gene that results in undetectable levels of the protein has been associated with lethal autosomal recessive lissencephaly-7. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2015],

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-CDK5 antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Jurkat Lane 2: HeLa Lane 3: NIH-3T3 Lane 4: PC-12 Predicted band size: 33kDa Observed band size: 33kDa

