

Cdk5 (phospho Tyr15) Polyclonal Antibody

Catalog No :	YP0380
Reactivity :	Human;Mouse;Rat;Monkey
Applications :	WB;IHC;IF;ELISA
Target :	CDK5
Fields :	>>Axon guidance;>>Alzheimer disease;>>Pathways of neurodegeneration - multiple diseases;>>Cocaine addiction
Gene Name :	CDK5
Protein Name :	Cyclin-dependent kinase 5
Human Gene Id :	1020
Human Swiss Prot No :	Q00535
Mouse Gene Id :	12568
Mouse Swiss Prot No :	P49615
Rat Gene Id :	140908
Rat Swiss Prot No :	Q03114
Immunogen :	The antiserum was produced against synthesized peptide derived from human CDK5 around the phosphorylation site of Tyr15. AA range:1-50
Specificity :	Phospho-Cdk5 (Y15) Polyclonal Antibody detects endogenous levels of Cdk5 protein only when phosphorylated at Y15.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200

Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	33kD
Cell Pathway :	Axon guidance;Alzheimer's disease;
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],
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.,
Subcellular Location :	[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 attach
Expression :	[Isoform 1]: Ubiquitously expressed (PubMed:17009320, PubMed:19693690).

Accumulates in cortical neurons (at protein level) (PubMed:17009320). ; [Isoform 2]: Expressed in the testis, skeletal muscle, colon, bone marrow and ovary.

Tag : orthogonal,hot

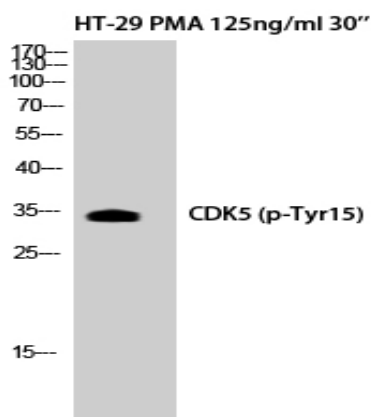
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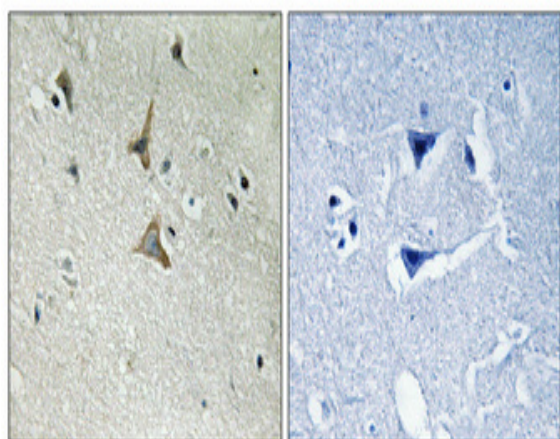
Host : Rabbit

Modifications : Phospho

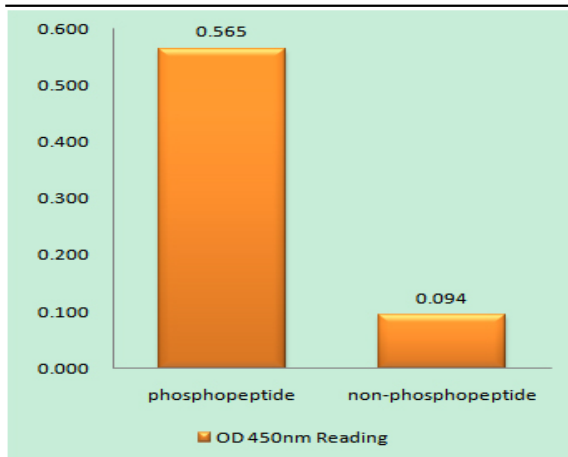
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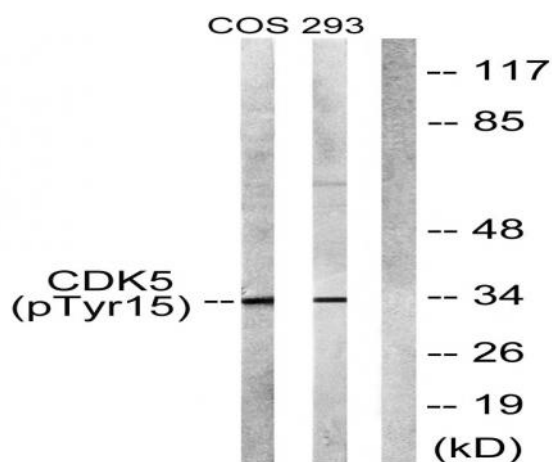
Western Blot analysis of HT29+PMA cells using Phospho-Cdk5 (Y15) Polyclonal Antibody



Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100(4° overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using CDK5 (Phospho-Tyr15) Antibody



Western blot analysis of lysates from COS7 cells treated with EGF 200ng/ml 30' and 293 cells treated with H₂O₂ 100u, 15mins, using CDK5 (Phospho-Tyr15) Antibody. The lane on the right is blocked with the phospho peptide.