

Rabbit anti-Human CDK5 Polyclonal Antibody | anti-CDK5 antibody

CDK5 (Ab-15) Antibody

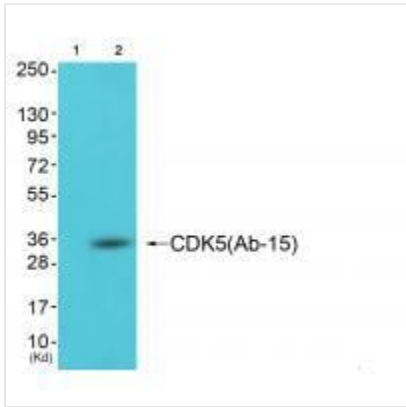
CATALOG # AAA307733	HOST Rabbit	REACTIVITY Human	APPLICATIONS Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

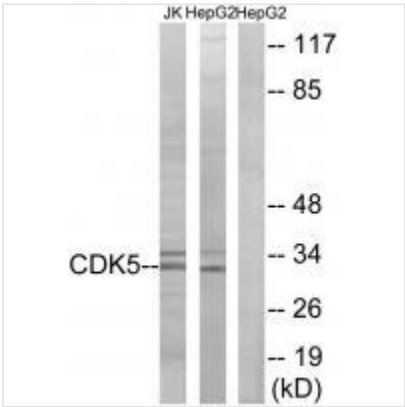
CDK5; Polyclonal Antibody; CDK5 (Ab-15) Antibody; CRK6; Cell division protein kinase 5; EC 2.7.11.22; PSSALRE; anti-CDK5 antibody

PRODUCT SPECIFICATIONS

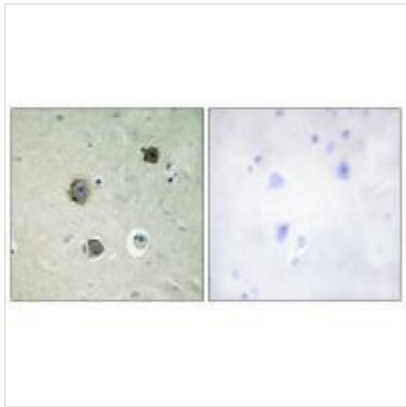
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Specificity	The antibody detects endogenous levels of total CDK5 protein.
Purity/Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Form/Format	Rabbit IgG in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1.0 mg/ml (varies by lot)
Sequence Length	260
Applicable Applications for anti-CDK5 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen Type	Peptide
Immunogen Description	Synthesized non-phosphopeptide derived from human CDK5 around the phosphorylation site of tyrosine 15 (G-T-Y(p)-G-T).
Target Name	CDK5
Preparation and Storage	Store at -20 degree C



WB (Western Blot)
Western blot analysis of extracts from cos-7 cells (Lane 2), using CDK5 (Ab-15) antibody. The lane on the left is treated with synthesized peptide.



WB (Western Blot)
Western blot analysis of extracts from Jurkat cells and HepG2 cells, using CDK5 (Ab-15) antibody.



IHC (Immunohistochemistry)
Immunohistochemistry analysis of paraffin-embedded human brain tissue using CDK5 (Ab-15) antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-CDK5 antibody	Proline-directed serine/threonine-protein kinase essential for neuronal cell cycle arrest and differentiation and may be involved in apoptotic cell death in neuronal diseases by triggering abortive cell cycle re-entry. Interacts with D1 and D3-type G1 cyclins. Phosphorylates SRC, NOS3, VIM/vimentin, p35/CDK5R1, MEF2A, SIPA1L1, SH3GLB1, PXN, PAK1, MCAM/MUC18, SEPT5, SYN1, DNM1, AMPH, SYNJ1, CDK16, RAC1, RHOA, CDC42, TONEBP/NFAT5, MAPT/TAU, MAP1B, histone H1, p53/TP53, HDAC1, APEX1, PTK2/FAK1, huntingtin/HTT, ATM, MAP2, NEFH and NEFM. Regulates several neuronal development and physiological processes including neuronal survival, migration and differentiation, axonal and neurite growth, synaptogenesis, oligodendrocyte differentiation, synaptic plasticity and neurotransmission, by phosphorylating key proteins. Activated by interaction with CDK5R1 (p35) and CDK5R2 (p39), especially in post-mitotic neurons, and promotes CDK5R1 (p35) expression in an autostimulation loop. Phosphorylates many downstream substrates such as Rho and Ras family small GTPases (e.g. PAK1, RAC1, RHOA, CDC42) or microtubule-binding proteins (e.g. MAPT/TAU, MAP2, MAP1B), and modulates actin dynamics to regulate neurite growth and/or spine morphogenesis. Phosphorylates also exocytosis associated proteins such as MCAM/MUC18, SEPT5, SYN1, and CDK16/PCTAIRE1 as well as endocytosis associated proteins such as DNM1, AMPH and SYNJ1 at synaptic terminals. In the mature central nervous system (CNS), regulates neurotransmitter movements by phosphorylating substrates associated with neurotransmitter release and synapse plasticity; synaptic vesicle exocytosis, vesicles fusion with the presynaptic membrane, and endocytosis. Promotes cell survival by activating anti-apoptotic proteins BCL2 and STAT3, and negatively regulating of JNK3/MAPK10 activity. Phosphorylation of p53/TP53 in response to genotoxic and oxidative stresses enhances its stabilization by preventing ubiquitin ligase-mediated proteasomal degradation, and induces transactivation of p53/TP53 target genes, thus regulating apoptosis. Phosphorylation of p35/CDK5R1 enhances its stabilization by preventing calpain-mediated proteolysis producing p25/CDK5R1 and avoiding ubiquitin ligase-mediated proteasomal degradation. During aberrant cell-cycle activity and DNA damage, p25/CDK5 activity elicits cell-cycle activity and double-strand DNA breaks that precedes neuronal death by deregulating HDAC1. DNA damage triggered phosphorylation of huntingtin/HTT in nuclei of neurons protects neurons against polyglutamine expansion as well as DNA damage mediated toxicity. Phosphorylation of PXN reduces its interaction with PTK2/FAK1 in matrix-cell focal adhesions (MCFA) during oligodendrocytes (OLs) differentiation. Negative regulator of Wnt/beta-catenin signaling pathway. Activator of the GAIT (IFN-gamma-activated inhibitor of translation) pathway, which suppresses expression of a post-transcriptional regulon of proinflammatory genes in myeloid cells; phosphorylates the linker domain of glutamyl-prolyl tRNA synthetase (EPRS) in a IFN-gamma-dependent manner, the initial event in assembly of the GAIT complex. Phosphorylation of SH3GLB1 is required for autophagy induction in starved neurons. Phosphorylation of TONEBP/NFAT5 in response to osmotic stress mediates its rapid nuclear localization. MEF2 is inactivated by phosphorylation in nucleus in response to neurotoxin, thus leading to neuronal apoptosis. APEX1 AP-endodeoxyribonuclease is repressed by phosphorylation, resulting in accumulation of DNA damage and contributing to neuronal death. NOS3 phosphorylation down regulates NOS3-derived nitrite (NO) levels. SRC phosphorylation mediates its ubiquitin-dependent degradation and thus leads to cytoskeletal reorganization. May regulate endothelial cell migration and angiogenesis via the modulation of lamellipodia formation. Involved in dendritic spine morphogenesis by mediating the EFNA1-EPHA4 signaling. 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.Meyerson M., EMBO J. 11:2909-2917(1992).Meyerson M.; Submitted (FEB-1993) to the EMBL/GenBank/DDBJ databases.Kalnine N., Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Product Categories/Family for anti-CDK5 antibody	Total protein Ab

NCBI AND UNIPROT INFORMATION

NCBI GI #	256542306
NCBI GeneID	1020
NCBI Accession #	NP_001157882.1
NCBI GenBank Nucleotide #	NM_001164410.2
UniProt Accession #	Q00535; A1XKG3
Molecular Weight	29,544 Da
NCBI Official Full Name	cyclin-dependent-like kinase 5 isoform 2
NCBI Official Synonym Full Names	cyclin-dependent kinase 5

NCBI Official Symbol	CDK5
NCBI Official Synonym Symbols	LIS7; PSSALRE
NCBI Protein Information	cyclin-dependent-like kinase 5
UniProt Protein Name	Cyclin-dependent-like kinase 5
UniProt Gene Name	CDK5
UniProt Synonym Gene Names	CDKN5; TPKII catalytic subunit
UniProt Entry Name	CDK5_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/cdk5-antibody-immunohistochemistry-western-blot-elisa/307733>