



PhosphoSolutions®
Antibodies that work™

Colorado Biosciences Park
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Tel: (888) 442-7100

Anti-Cdk5

(Excellent for immunohistochemistry use)

Catalog Number: 308-Cdk5 **Size:** 100 µl **Clone:** 1H3 **Isotype:** IgG

Product Description: Mouse monoclonal antibody

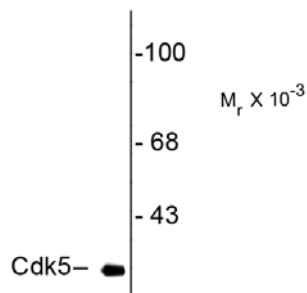
Applications: **WB:** 1:1,000 **IHC:** 1:500

Antigen: Purified Cdk5

Species reactivity: The antibody has been directly tested for reactivity in human, mouse and rat.

Biological Significance: The neuronal protein kinase, Cdk5 has been implicated in a vast array of normal neuronal functions including regulation of neurotransmitter synthesis (Kansy J et al., 2004), the presynaptic vesicle cycle (Nguyen, C. & Bibb, JA 2003), neurotransmitter receptor trafficking and dopamine neurotransmission (Bibb, JA *et al.* 1999). At the same time Cdk5 has been implicated in a plethora of neurological and neuropsychiatric disorders including Alzheimer's, Parkinson's, Huntington's, epilepsy, schizophrenia, and drug addiction. Detection of Cdk5 in normal samples as well as tissue undergoing neurodegeneration may advance studies in these areas. Moreover, this antibody may allow more accurate postmortem evaluations of Cdk5 protein expression, and thus serve as a valuable new reagent for neuropathology.

Anti-CDK5



Western blot of rat caudate lysate showing specific immunolabeling of the ~28k Cdk5 protein.

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WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability: Store at -20°C; stable for at least one year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

Purification Method: Protein G purified culture supernatant.

Antibody Specificity: The antibody is specific for the ~ 28kDa Cdk5 protein in Western blots of rat striatal lysate. The antibody shows no cross reactivity with the Cdk5 cofactor p35 or its degradation product p25. This monoclonal also works well for immunocytochemistry using primary cultured rat neurons and for immunohistochemistry on mouse brain tissue.

Quality Control Tests: Western blots performed on each lot.

References (general):

Kansy, J. *et al.* Identification of tyrosine hydroxylase as a physiological substrate of Cdk5. *J. Neurochem.* **91**, 374-384 (2004).

Nguyen, C. & Bibb, J. A. Cdk5 and the mystery of synaptic vesicle endocytosis. *J Cell Biol.* **163**, 697- 699 (2003).

Bibb, J. A. *et al.* Phosphorylation of DARPP-32 by Cdk5 modulates dopamine signaling in neurons. *Nature* **402**, 669-671 (1999).

Lagace, D. C. *et al.* Cdk5 is essential for adult hippocampal neurogenesis. *Proc Natl Acad Sci USA* **105**, 18567–18571 (2008).

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