

**Cdk5 Antibody**  
**Mouse monoclonal antibody**  
**Catalog # AN1194****Specification**

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**Cdk5 Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IHC, IF, WB, FC        |
| Primary Accession | <a href="#">Q03114</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Mouse                  |
| Clonality         | monoclonal             |
| Isotype           | IgG1                   |
| Calculated MW     | 28 KDa                 |

**Cdk5 Antibody - Additional Information**

|           |        |
|-----------|--------|
| Gene ID   | 140908 |
| Gene Name | CDK5   |

**Other Names**

Cyclin-dependent-like kinase 5, Cell division protein kinase 5, Serine/threonine-protein kinase PSSALRE, Tau protein kinase II catalytic subunit, TPKII catalytic subunit, Cdk5, Cdkn5

**Target/Specificity**

Purified rat Cdk5.

**Dilution**

IHC~~1:500  
IF~~1:500  
WB~~ 1:1000  
FC~~1:500

**Format**

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.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Cdk5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

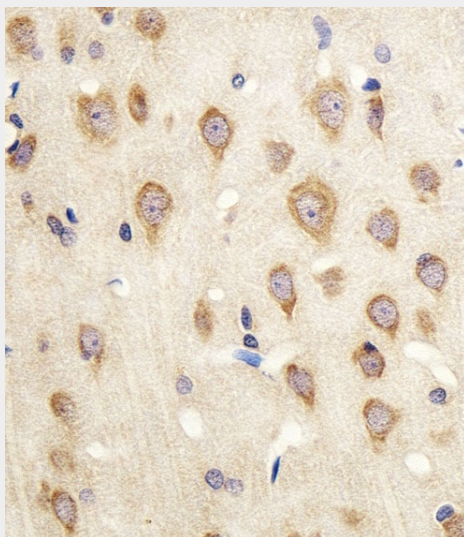
Blue Ice

## Cdk5 Antibody - Protocols

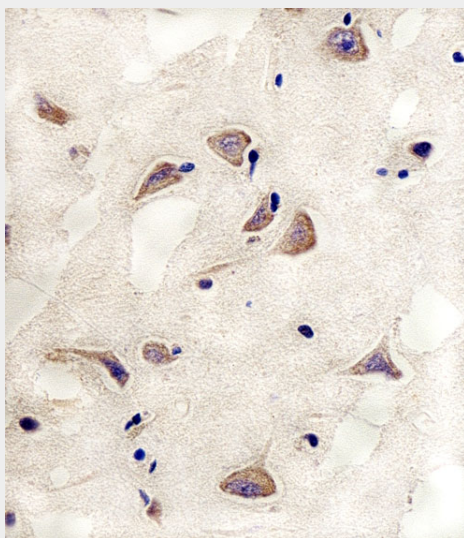
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Cdk5 Antibody - Images

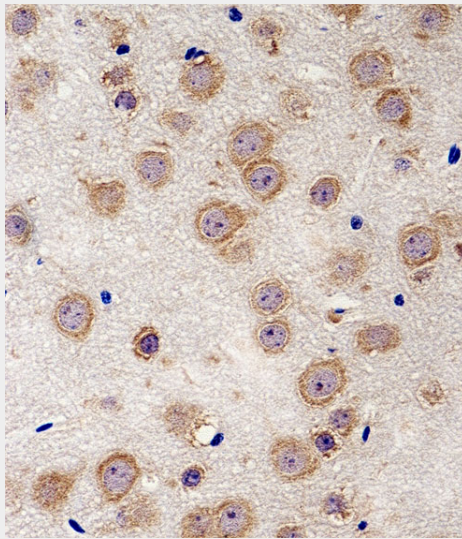


Immunohistochemical analysis of paraffin-embedded R. brain section using Cdk5 Antibody (Cat#AN1194). AN1194 was diluted at 1:500 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

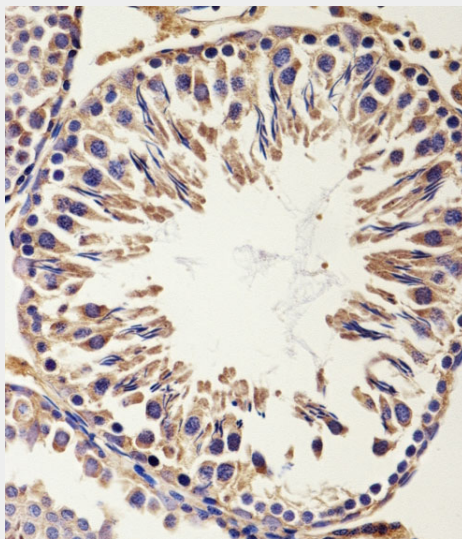


Immunohistochemical analysis of paraffin-embedded H. brain section using Cdk5 Antibody

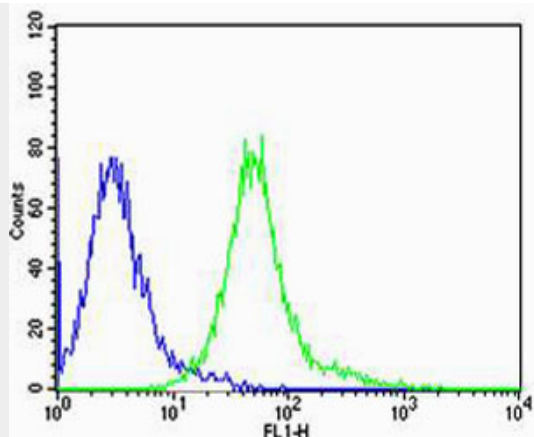
(Cat#AN1194). AN1194 was diluted at 1:500 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



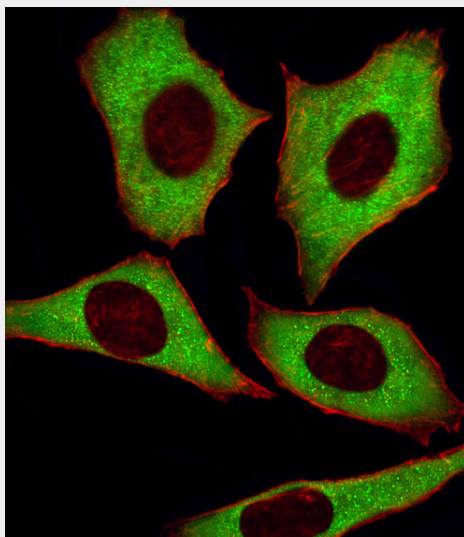
Immunohistochemical analysis of paraffin-embedded M. brain section using Cdk5 Antibody (Cat#AN1194). AN1194 was diluted at 1:500 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



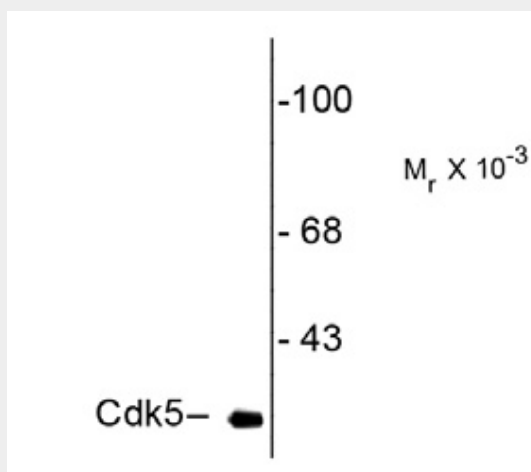
Immunohistochemical analysis of paraffin-embedded R. testis section using Cdk5 Antibody (Cat#AN1194). AN1194 was diluted at 1:500 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Flow cytometric analysis of NIH/3T3 cells using Park7 (DJ-1) Antibody(green, Cat#AN1194) compared to an isotype control of mouse IgG1(blue). AN1194 was diluted at 1:500 dilution. An Alexa Fluor® 488 goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody.



Fluorescent image of U251 cells stained with Cdk5 Antibody (Cat#AN1194). AN1194 was diluted at 1:500 dilution. An Alexa Fluor 488-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).



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

## **Cdk5 Antibody - Background**

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.

## **Cdk5 Antibody - References**

- 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).