# Anti-Cdk5 Antibody [SR39-01]

## ET1602-17

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|---|---|
| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human, Mouse, Rat |
| **Applications:** | WB, IHC-P |
| **Molecular Wt:** | Predicted band size: 33 kDa |
| **Clone number:** | SR39-01 |

**Description:** Cyclin dependent kinase 5 is a protein, and more specifically an enzyme, that is encoded by the Cdk5 gene. It was discovered 15 years ago and it is saliently expressed in post-mitotic central nervous system neurons (CNS). The molecule belongs to the cyclin-dependent kinase family. Kinases are enzymes that catalyze reactions of phosphorylation, a process that allows the substrate to gain a phosphate group donated by an organic compound known as ATP. Phosphorylations are of vital importance during glycolysis, therefore, making kinases an essential part of the cell due to their role in the metabolism, cell signaling and many other processes.

**Immunogen:** Synthetic peptide within Human Cdk5 aa 243-292 / 292.

**Positive control:** HCT 116 cell lysate, MCF7 cell lysate, SH-SY5Y cell lysate, PC-12 cell lysate, Mouse brain tissue lysate, Rat brain tissue lysate, human thyroid carcinoma tissue.

**Subcellular location:** Cytoplasm, Nucleus, Cell membrane, Perikaryon, Cell junction

**Database links:** SwissProt: Q00535 Human | P49615 Mouse | Q03114 Rat

**Recommended Dilutions:**

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|---|---|
| **WB** | 1:500-1:1,000 |
| **IHC-P** | 1:50-1:400 |

**Storage Buffer:** 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

**Purity:** Protein A affinity purified.

## Images

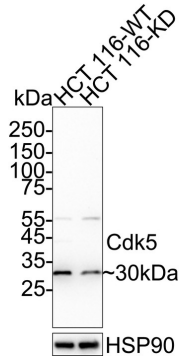


**Fig1:** Western blot analysis of Cdk5 on different lysates with Rabbit anti-Cdk5 antibody (ET1602-17) at 1/500 dilution.

Lane 1: HCT 116-si NT cell lysate
Lane 2: HCT 116-si Cdk5 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 33 kDa
Observed band size: 30 kDa

Exposure time: 40 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1602-17) at 1/500 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

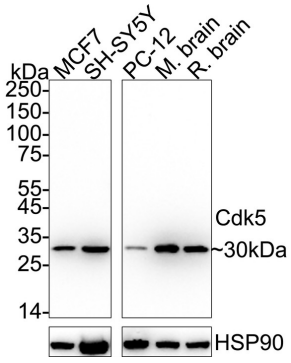


**Fig2:** Western blot analysis of Cdk5 on different lysates with Rabbit anti-Cdk5 antibody (ET1602-17) at 1/1,000 dilution.

Lane 1: MCF7 cell lysate (20 µg/Lane)
Lane 2: SH-SY5Y cell lysate (20 µg/Lane)
Lane 3: PC-12 cell lysate (20 µg/Lane)
Lane 4: Mouse brain tissue lysate (30 µg/Lane)
Lane 5: Rat brain tissue lysate (30 µg/Lane)

Predicted band size: 33 kDa
Observed band size: 30 kDa

Exposure time: 42 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1602-17) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

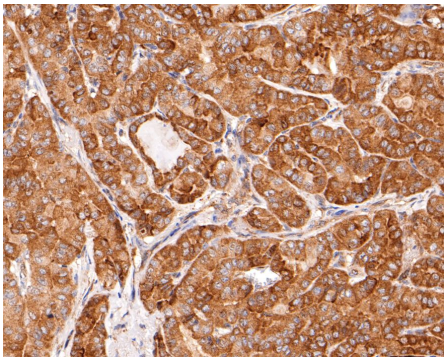

**Fig3:** Immunohistochemical analysis of paraffin-embedded human thyroid carcinoma tissue with Rabbit anti-Cdk5 antibody (ET1602-17) at 1/400 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (ET1602-17) at 1/400 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



## Background References

1. Sadleir KR & Vassar R Cdk5 Protein Inhibition and A 42 Increase BACE1 Protein Level in Primary Neurons by a Post-transcriptional Mechanism: IMPLICATIONS OF CDK5 AS A THERAPEUTIC TARGET FOR ALZHEIMER DISEASE. J Biol Chem 287:7224-35 (2012).
2. Zhang HH et al. Increased synaptophysin is involved in inflammation-induced heat hyperalgesia mediated by cyclin-dependent kinase 5 in rats. PLoS One 7:e46666 (2012).