

# Cdk5 (G-10): sc-32497

## BACKGROUND

Cell cycle progression is controlled in part by a family of cyclin proteins and cyclin dependent kinases (Cdks). Cdk proteins work in concert with the cyclins to phosphorylate key substrates involved in each phase of cell cycle progression. Another family of proteins, Cdk inhibitors, also plays a role in regulating cell cycle by binding to cyclin-Cdk complexes and modulating their activity. Several Cdk proteins have been identified, including Cdk2-Cdk8, PCTAIRE-1-3, PITALRE and PITSLRE. Cdk5 is thought to be involved in the G<sub>1</sub> to S transition of the cell cycle and is highly expressed in mature neurons. Activity of Cdk5 increases significantly during neuronal differentiation. Cdk5 has been postulated to be a neurofilament or  $\tau$  protein kinase, based on its ability to phosphorylate these proteins *in vitro*.

## REFERENCES

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- Siebert, R., et al. 1996. Role of the cyclin-dependent kinase 4 and 6 inhibitor gene family p15, p16, p18 and p19 in leukemia and lymphoma. *Leuk. Lymphoma* 23: 505-520.
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## CHROMOSOMAL LOCATION

Genetic locus: CDK5 (human) mapping to 7q36.1; Cdk5 (mouse) mapping to 5 A3.

## SOURCE

Cdk5 (G-10) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cdk5 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32497 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Cdk5 (G-10) is recommended for detection of Cdk5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cdk5 (G-10) is also recommended for detection of Cdk5 in additional species, including canine.

Suitable for use as control antibody for Cdk5 siRNA (h): sc-29263, Cdk5 siRNA (m): sc-35047, Cdk5 shRNA Plasmid (h): sc-29263-SH, Cdk5 shRNA Plasmid (m): sc-35047-SH, Cdk5 shRNA (h) Lentiviral Particles: sc-29263-V and Cdk5 shRNA (m) Lentiviral Particles: sc-35047-V.

Molecular Weight of Cdk5: 35 kDa.

Positive Controls: HeLa + PMA nuclear extract: sc-2121, K-562 + PMA nuclear extract: sc-2131 or Jurkat + PMA nuclear extract: sc-2133.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Cdk5 (J-3): sc-6247** or **Cdk5 (DC 17): sc-249**, our highly recommended monoclonal alternatives to Cdk5 (G-10). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Cdk5 (J-3): sc-6247**.