

# Cdk8 (D-12): sc-32492

## 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. Large complexes containing Cdk8, cyclin C and the large subunit of RNA polymerase II have been identified. Cdk8 is thought to regulate RNA polymerase II function in conjunction with cyclin C. Cdk8 has been demonstrated to function as a transcriptional activator when fused to the DNA binding domain of GAL4.

## REFERENCES

- Okuda, T., et al. 1992. PCTAIRE-1 and PCTAIRE-3, two members of a novel Cdc2/Cdc28-related protein kinase gene family. *Oncogene* 7: 2249-2258.
- Pines, J. 1994. The cell cycle kinases. *Sem. Cancer Biol.* 5: 305-313.
- MacLachlan, T.K., et al. 1995. Cyclins, cyclin-dependent kinases and Cdk inhibitors: implications in cell cycle control and cancer. *Crit. Rev. Eukaryot. Gene Expr.* 5: 127-156.
- 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.
- Rickert, P., et al. 1996. Cyclin C/Cdk8 is a novel CTD kinase associated with RNA polymerase II. *Oncogene* 12: 2631-2640.
- Leclerc, V., et al. 1996. *Drosophila* Cdk8, a kinase partner of cyclin C that interacts with the large subunit of RNA polymerase II. *Mol. Biol. Cell* 7: 505-513.
- Gold, M.O., et al. 1996. Viral transactivators E1A and VP16 interact with a large complex that is associated with CTD kinase activity and contains Cdk8. *Nucleic Acids Res.* 24: 3771-3777.
- Dirks, P.B., et al. 1997. Current concepts in neuro-oncology: the cell cycle—a review. *Neurosurgery* 40: 1000-1013.

## CHROMOSOMAL LOCATION

Genetic locus: CDK8 (human) mapping to 13q12.13; Cdk8 (mouse) mapping to 5 G3.

## SOURCE

Cdk8 (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cdk8 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32492 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Cdk8 (D-12) is recommended for detection of Cdk8 of mouse 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).

Suitable for use as control antibody for Cdk8 siRNA (h): sc-29267, Cdk8 siRNA (m): sc-35049, Cdk8 shRNA Plasmid (h): sc-29267-SH, Cdk8 shRNA Plasmid (m): sc-35049-SH, Cdk8 shRNA (h) Lentiviral Particles: sc-29267-V and Cdk8 shRNA (m) Lentiviral Particles: sc-35049-V.

Molecular Weight of Cdk8: 53 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

## 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 **Cdk8 (D-9): sc-13155**, our highly recommended monoclonal alternative to Cdk8 (D-12). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Cdk8 (D-9): sc-13155**.