

# Cdk8 (H-139): sc-5612

## 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, PITSLRE 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. *Semin. 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.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: CDK8 (human) mapping to 13q12.13.

## SOURCE

Cdk8 (H-139) is a rabbit polyclonal antibody raised against amino acids 326-464 mapping at 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.

## 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.

## APPLICATIONS

Cdk8 (H-139) is recommended for detection of Cdk8 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

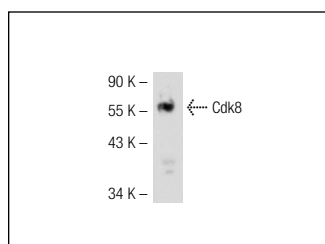
Cdk8 (H-139) is also recommended for detection of Cdk8 in additional species, including equine, canine, bovine, porcine and avian.

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

## DATA



Cdk8 (H-139): sc-5612. Western blot analysis of Cdk8 expression in K-562 nuclear extract.

## SELECT PRODUCT CITATIONS

- Cabart, P., et al. 2004. BRCA1 cooperates with NUFIP and P-TEFb to activate transcription by RNA polymerase II. *Oncogene* 23: 5316-5329.
- Kim, Y.K., et al. 2006. Recruitment of TFIID to the HIV LTR is a rate-limiting step in the emergence of HIV from latency. *EMBO J.* 25: 3596-3604.
- Vernimmen, D., et al. 2007. Long-range chromosomal interactions regulate the timing of the transition between poised and active gene expression. *EMBO J.* 26: 2041-2051.
- Wu, W., et al. 2008. Antibody array analysis with label-based detection and resolution of protein size. *Mol. Cell Proteomics* 8: 245-257.
- Thiaville, M.M., et al. 2008. Activated transcription via mammalian amino acid response elements does not require enhanced recruitment of the Mediator complex. *Nucleic Acids Res.* 36: 5571-5580.



Try **Cdk8 (D-9): sc-13155**, our highly recommended monoclonal alternative to Cdk8 (H-139). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Cdk8 (D-9): sc-13155**.