

Cdk8 (D-9): sc-13155

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.

CHROMOSOMAL LOCATION

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

SOURCE

Cdk8 (D-9) is a mouse monoclonal antibody raised against amino acids 326-464 of Cdk8 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cdk8 (D-9) is available conjugated to agarose (sc-13155 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13155 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13155 PE), fluorescein (sc-13155 FITC), Alexa Fluor® 488 (sc-13155 AF488), Alexa Fluor® 546 (sc-13155 AF546), Alexa Fluor® 594 (sc-13155 AF594) or Alexa Fluor® 647 (sc-13155 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13155 AF680) or Alexa Fluor® 790 (sc-13155 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Cdk8 (D-9) is available conjugated to TRITC (sc-13155 TRITC, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

Cdk8 (D-9) is recommended for detection of Cdk8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), immunohistochemistry (including paraffin-embedded sections) (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.

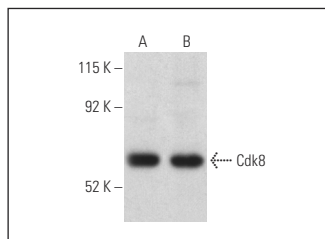
Molecular Weight of Cdk8: 53 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, SW480 cell lysate: sc-2219 or HeLa whole cell lysate: sc-2200.

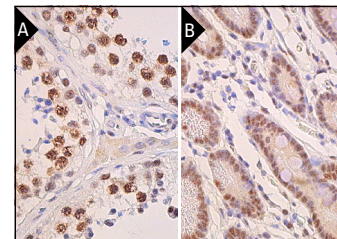
STORAGE

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

DATA



Cdk8 (D-9): sc-13155. Western blot analysis of Cdk8 expression in SW480 (A) and HeLa (B) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



Cdk8 (D-9): sc-13155. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Sato, S., et al. 2004. A set of consensus mammalian mediator subunits identified by multidimensional protein identification technology. *Mol. Cell* 14: 685-691.
2. Belakavadi, M., et al. 2008. MED1 phosphorylation promotes its association with mediator: implications for nuclear receptor signaling. *Mol. Cell. Biol.* 28: 3932-3942.
3. Kapoor, A., et al. 2010. The histone variant macroH2A suppresses melanoma progression through regulation of Cdk8. *Nature* 468: 1105-1109.
4. Gu, W., et al. 2013. Tumor-suppressive effects of Cdk8 in endometrial cancer cells. *Cell Cycle* 12: 987-999.
5. Tang, H.W., et al. 2018. The TORC1-regulated CPA complex rewires an RNA processing network to drive autophagy and metabolic reprogramming. *Cell Metab.* 27: 1040-1054.
6. Yin, T., et al. 2019. miR-152-3p modulates hepatic carcinogenesis by targeting cyclin-dependent kinase 8. *Pathol. Res. Pract.* 215: 152406.
7. Zhang, N., et al. 2020. MED13L integrates mediator-regulated epigenetic control into lung cancer radiosensitivity. *Theranostics* 10: 9378-9394.
8. Zhang, S., et al. 2022. PAX3-FOXO1 coordinates enhancer architecture, eRNA transcription, and RNA polymerase pause release at select gene targets. *Mol. Cell* 82: 4428-4442.e7.
9. Cuan, X., et al. 2024. Discovery of flavonoid-containing compound Lupalbigenin as anti-NSCLC cancer agents via suppression of EGFR and ERK1/2 pathway. *Bioorg. Chem.* 153: 107808.

RESEARCH USE

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

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