

# Cdk9 (D-7): sc-13130

## BACKGROUND

Cdk9 Antibody (D-7) is a high quality monoclonal Cdk9 antibody (also designated Cyclin-dependent kinase 9 antibody, Serine/threonine-protein kinase PITALRE antibody or CDC2L4 antibody) suitable for the detection of the Cdk9 protein of mouse, rat and human origin. Cdk9 Antibody (D-7) is available as both the non-conjugated anti-Cdk9 antibody form, as well as multiple conjugated forms of anti-Cdk9 antibody, including agarose, HRP, PE, FITC and multiple Alexa Fluor® conjugates. A family of proteins designated cyclin dependent kinases (Cdks) are critical regulators of cell cycle progression. Cdk family members, including Cdc2 p34, Cdk1-9, PISSLRE, KKIALRE, PITSLRE and PCTAIRE 1-3 are constitutively expressed throughout the cell cycle. Cdc2 p34 activity peaks during mitosis and Cdk2 activity rises in late G<sub>1</sub> or early S phase. Cdk4 and Cdk6 are critically involved in G<sub>1</sub> to S phase progression. The functions of Cdk3, Cdk5b, PISSLRE, KKIALRE and PCTAIRE 1-3 are less well defined. Cdk9 (also designated PITALRE) has been shown to specifically phosphorylate the retinoblastoma protein. The more recently cloned *Drosophila* protein, P-TEFb, is thought to be the homolog of mammalian PITALRE. P-TEFb has been shown to be required for HIV Tat transcriptional activation.

## CHROMOSOMAL LOCATION

Genetic locus: CDK9 (human) mapping to 9q34.11; Cdk9 (mouse) mapping to 2 B.

## SOURCE

Cdk9 (D-7) is a mouse monoclonal antibody raised against amino acids 204-372 of Cdk9 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13130 X, 200 µg/0.1 ml.

Cdk9 (D-7) is available conjugated to agarose (sc-13130 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13130 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13130 PE), fluorescein (sc-13130 FITC), Alexa Fluor® 488 (sc-13130 AF488), Alexa Fluor® 546 (sc-13130 AF546), Alexa Fluor® 594 (sc-13130 AF594) or Alexa Fluor® 647 (sc-13130 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13130 AF680) or Alexa Fluor® 790 (sc-13130 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Cdk9 (D-7) is available conjugated to biotin (sc-13130 B), 200 µg/ml, for WB, IHC(P) and ELISA.

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

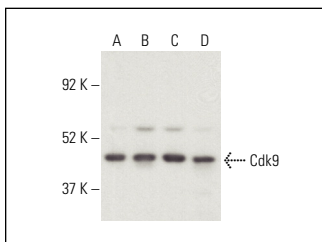
Cdk9 (D-7) is recommended for detection of Cdk9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:2,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 Cdk9 siRNA (h): sc-29268, Cdk9 siRNA (m): sc-35050, Cdk9 shRNA Plasmid (h): sc-29268-SH, Cdk9 shRNA Plasmid (m): sc-35050-SH, Cdk9 shRNA (h) Lentiviral Particles: sc-29268-V and Cdk9 shRNA (m) Lentiviral Particles: sc-35050-V.

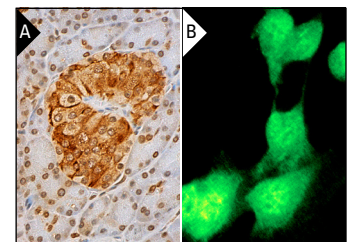
Molecular Weight of Cdk9: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or A-431 whole cell lysate: sc-2201.

## DATA



Cdk9 (D-7): sc-13130. Western blot analysis of Cdk9 expression in HeLa (A), Jurkat (B), K-562 (C) and A-431 (D) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



Cdk9 (D-7) HRP: sc-13130 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear staining of exocrine glandular cells and nuclear and cytoplasmic staining of Islets of Langerhans. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (A). Cdk9 (D-7): sc-13130. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization (B).

## SELECT PRODUCT CITATIONS

1. Michels, A.A., et al. 2003. MAQ1 and 7SK RNA interact with CDK9/cyclin T complexes in a transcription-dependent manner. *Mol. Cell. Biol.* 23: 4859-4869.
2. Lv, B., et al. 2018. Enhancement of adenovirus infection and adenoviral vector-mediated gene delivery by bromodomain inhibitor JQ1. *Sci. Rep.* 8: 11554.
3. Xiong, Y., et al. 2019. The bromodomain protein BRD4 positively regulates necroptosis via modulating MLKL expression. *Cell Death Differ.* 26: 1929-1941.
4. Nakazawa, Y., et al. 2020. Ubiquitination of DNA damage-stalled RNAPII promotes transcription-coupled repair. *Cell* 180: 1228-1244.e24.

## RESEARCH USE

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

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