SANTA CRUZ BIOTECHNOLOGY, INC.

Cdk9 (H-169): sc-8338

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

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_1 or early S phase. Cdk4 and Cdk6 are critically involved in G_1 to S phase progression. The functions of Cdk3, Cdk5β, 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-TEFβ, is thought to be the homolog of mammalian PITALRE. P-TEFβ 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 (H-169) is a rabbit polyclonal antibody raised against amino acids 204-372 mapping at the C-terminus of Cdk9 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.

Available as TransCruz reagent for ChIP application, sc-8338 X, 200 µg/0.1 ml.

APPLICATIONS

Cdk9 (H-169) is recommended for detection of Cdk9 of mouse, rat and 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), 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).

Cdk9 (H-169) is also recommended for detection of Cdk9 in additional species, including equine, canine, bovine, porcine and avian.

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.

Cdk9 (H-169) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of Cdk9: 43 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, L8 cell lysate: sc-3807 or HL-60 whole cell lysate: sc-2209.

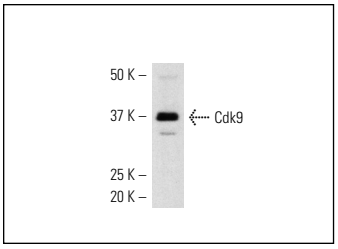
STORAGE

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

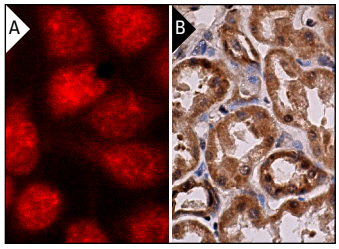
RESEARCH USE

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

DATA



Cdk9 (H-169): sc-8338. Western blot analysis of Cdk9 expression in NIH/3T3 whole cell lysate.



Cdk9 (H-169): sc-8338. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and nuclear staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Flores, O., et al. 1999. Host-cell positive transcription elongation factor β kinase antivity is essential and limiting for HIV type 1 replication. Proc. Natl. Acad. Sci. USA 96: 7208-7213.
2. Rahman, S., et al. 2011. The Brd4 extraterminal domain confers transcription activation independent of pTEFβ by recruiting multiple proteins, including NSD3. Mol. Cell. Biol. 31: 2641-2652.
3. Yoon, Y.J., et al. 2011. KRIBB11 inhibits HSP70 synthesis through inhibition of heat shock factor 1 function by impairing the recruitment of positive transcription elongation factor β to the hsp70 promoter. J. Biol. Chem. 286: 1737-1747.
4. Andorfer, P. and Rotheneder, H. 2011. EAPP: gatekeeper at the crossroad of apoptosis and p21-mediated cell-cycle arrest. Oncogene 30: 2679-2690.
5. Milcarek, C., et al. 2011. The eleven-nineteen lysine-rich leukemia gene (ELL2) influences the histone H3 protein modifications accompanying the shift to secretory immunoglobulin heavy chain mRNA production. J. Biol. Chem. 286: 33795-33803.
6. Morachis, J.M., et al. 2011. Identification of kinase inhibitors that target transcription initiation by RNA polymerase II. Oncotarget 2: 18-28.
7. Vijayalingam, S. and Chinnadurai, G. 2013. Adenovirus L-E1A activates transcription through mediator complex-dependent recruitment of the super elongation complex. J. Virol. 87: 3425-3434.
8. Wang, W., et al. 2013. Mediator MED23 regulates basal transcription *in vivo* via an interaction with P-TEFβ. Transcription 4: 39-51.