SANTA CRUZ BIOTECHNOLOGY, INC.

Cdk9 (C-20): sc-484

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, 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-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 (C-20) is available as either rabbit (sc-484) or goat (sc-484-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of Cdk9 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-484 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cdk9 (C-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cdk9 (C-20) is also recommended for detection of Cdk9 in additional species, including equine, canine, bovine and porcine.

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: Cdk9 (h): 293T Lysate: sc-174086, HL-60 whole cell lysate: sc-2209 or NIH/3T3 whole cell lysate: sc-2210.

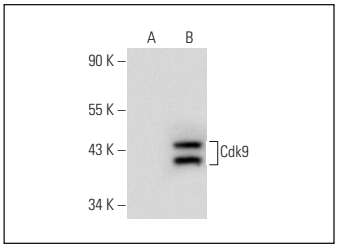
STORAGE

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

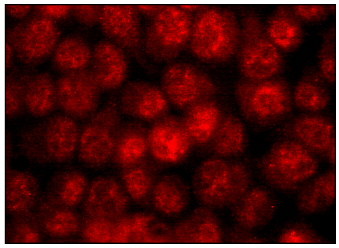
RESEARCH USE

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

DATA



Cdk9 (C-20)-G: sc-484-G. Western blot analysis of Cdk9 expression in non-transfected: sc-117752 (**A**) and human Cdk9 transfected: sc-174086 (**B**) 293T whole cell lysates.



Cdk9 (C-20): sc-484. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Garriga, J., et al. 1996. The Cdc2-related kinase PITALRE is the catalytic subunit of active multimeric protein complexes. Biochem. J. 319: 293-298.
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3. Garriga, J., et al. 2010. Selective control of gene expression by CDK9 in human cells. J. Cell. Physiol. 222: 200-208.
4. Galatioto, J., et al. 2010. CLP-1 associates with MyoD and HDAC to restore skeletal muscle cell regeneration. J. Cell Sci. 123: 3789-3795.
5. Lenasi, T., et al. 2011. Cap-binding protein complex links pre-mRNA capping to transcription elongation and alternative splicing through positive transcription elongation factor b (P-TEFb). J. Biol. Chem. 286: 22758-22768.
6. Blazek, D., et al. 2011. The Cyclin K/Cdk12 complex maintains genomic stability via regulation of expression of DNA damage response genes. Genes Dev. 25: 2158-2172.
7. Montes, M., et al. 2011. TCERG1 regulates alternative splicing of Bcl-x gene by modulating the rate of RNAPII transcription. Mol. Cell. Biol. 32: 751-762.
8. Sánchez-Hernández, N., et al. 2012. The FF4 and FF5 domains of transcription elongation regulator 1 (TCERG1) target proteins to the periphery of speckles. J. Biol. Chem. 287: 17789-17800.
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