

# Cdk10 (C-19): sc-51266

## BACKGROUND

Cell cycle progression is controlled, in part, by a family of cyclin dependent kinases (Cdks) that work to phosphorylate key substrates involved in each phase of cell cycle progression. Cdks are the catalytic subunits of serine/threonine protein kinases, a large family of proteins that act as regulators of the eukaryotic cell cycle. Several Cdk family members have been identified, including Cdc2 p34, Cdk2-10, PITSLRE, PCTAIRE-1-3, KKIAMRE, KKIALLRE, CDKN3 and NKIAMRE. Cdk10, also called PISSLRE, is a Cdc2-related kinase whose gene has been shown to encode two isoforms, each having a different function within the cell cycle. Although the two isoforms share nearly identical amino acid sequences, they differ at the C- and N- terminals. One Cdk isoform interacts with the transcription factor Ets-2, thereby modulating its transactivation activity, while the other is thought to have a role at the G<sub>2</sub>/M transition. Cdk10 mRNA has been shown to have the highest expression in lung, liver and kidney tissue, with gene upregulation implicated in cases of non-Hodgkin's follicular lymphoma.

## REFERENCES

1. Brambilla, R. and Draetta, G. 1994. Molecular cloning of PISSLRE, a novel putative member of the Cdk family of protein serine/threonine kinases. *Oncogene* 9: 3037-3041.
2. Sergère, J.C., Thuret, J.Y., Le Roux, G., Carosella, E.D. and Leteurtre, F. 2000. Human Cdk10 gene isoforms. *Biochem. Biophys. Res. Commun.* 276: 271-277.
3. Husson, H., Carideo, E.G., Neuberg, D., Schultze, J., Munoz, O., Marks, P.W., Donovan, J.W., Chillemi, A.C., O'Connell, P. and Freedman, A.S. 2001. Gene expression profiling of follicular lymphoma and normal germinal center B cells using cDNA arrays. *Blood* 99: 282-289.

## CHROMOSOMAL LOCATION

Genetic locus: CDK10 (human) mapping to 16q24.3; Cdk10 (mouse) mapping to 8 E1.

## SOURCE

Cdk10 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Cdk10 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.

Blocking peptide available for competition studies, sc-51266 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

Cdk10 (C-19) is recommended for detection of Cdk10 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).

Cdk10 (C-19) is also recommended for detection of Cdk10 in additional species, including canine.

Suitable for use as control antibody for Cdk10 siRNA (h): sc-72226, Cdk10 siRNA (m): sc-72227, Cdk10 shRNA Plasmid (h): sc-72226-SH, Cdk10 shRNA Plasmid (m): sc-72227-SH, Cdk10 shRNA (h) Lentiviral Particles: sc-72226-V and Cdk10 shRNA (m) Lentiviral Particles: sc-72227-V.

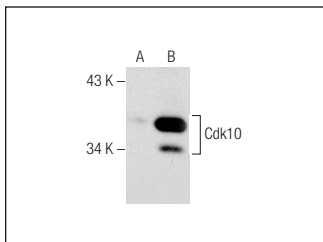
Molecular Weight of Cdk10: 38.5 kDa.

Positive Controls: Cdk10 (h4): 293 Lysate: sc-128294, Jurkat whole cell lysate: sc-2204 or HISM cell lysate: sc-2229.

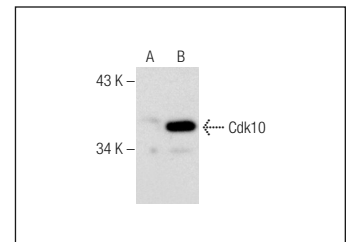
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Cdk10 (C-19): sc-51266. Western blot analysis of Cdk10 expression in non-transfected: sc-110760 (A) and human Cdk10 transfected: sc-128294 (B) 293 whole cell lysates.



Cdk10 (C-19): sc-51266. Western blot analysis of Cdk10 expression in non-transfected: sc-117752 (A) and human Cdk10 transfected: sc-128293 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Cai, D., Byth, K.F. and Shapiro, G.I. 2006. AZ703, an imidazo[1,2- $\alpha$ ]pyridine inhibitor of cyclin-dependent kinases 1 and 2, induces E2F-1-dependent apoptosis enhanced by depletion of cyclin-dependent kinase 9. *Cancer Res.* 66: 435-444.