

Cdk3 (H-45): sc-28256

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. Cdk3, like Cdk2, is known to be required for the G₁-S transition. Proteins involved in cell cycle control have become the subject of increased interest with regard to their potential roles in tumorigenesis. Both Cdk3 and Cdk2 have been mapped to regions of a human chromosome that may be altered in a variety of tumors.

REFERENCES

- Okuda, T., et al. 1992. PCTAIRE-1 and PCTAIRE-3, two members of a novel Cdc2/Cdc28-related protein kinase gene family. *Oncogene* 7: 2249-2258.
- Pines, J. 1994. The cell cycle kinases. *Sem. Cancer Biol.* 5: 305-313.
- MacLachlan, T.K., et al. 1995. Cyclins, cyclin-dependent kinases and Cdk inhibitors: implications in cell cycle control and cancer. *Crit. Rev. Euk. Gene Expr.* 5: 127-156.
- Bullrich, F., et al. 1995. Chromosomal mapping of members of the Cdc2 family of protein kinases, Cdk3, Cdk6, PISSLRE, and PITALRE, and a Cdk inhibitor, p27Kip1, to regions involved in human cancer. *Cancer Res.* 55: 1199-1205.

CHROMOSOMAL LOCATION

Genetic locus: CDK3 (human) mapping to 17q25.1; Cdk3 (mouse) mapping to 11 E2.

SOURCE

Cdk3 (H-45) is a rabbit polyclonal antibody raised against amino acids 261-305 mapping at the C-terminus of Cdk3 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.

APPLICATIONS

Cdk3 (H-45) is recommended for detection of Cdk3 of human, mouse and, to a lesser extent, rat 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).

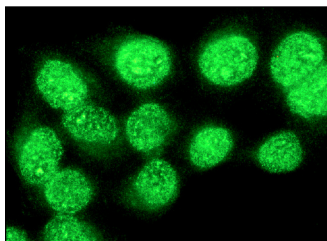
Suitable for use as control antibody for Cdk3 siRNA (h): sc-37578, Cdk3 siRNA (m): sc-37579, Cdk3 shRNA Plasmid (h): sc-37578-SH, Cdk3 shRNA Plasmid (m): sc-37579-SH, Cdk3 shRNA (h) Lentiviral Particles: sc-37578-V and Cdk3 shRNA (m) Lentiviral Particles: sc-37579-V.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Cdk3 (H-45): sc-28256. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Zheng, D., et al. 2008. Cyclin-dependent kinase 3-mediated activating transcription factor 1 phosphorylation enhances cell transformation. *Cancer Res.* 68: 7650-7660.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Cdk3 (4B6): sc-81836**, our highly recommended monoclonal alternative to Cdk3 (H-45).