SANTA CRUZ BIOTECHNOLOGY, INC.

Cdk6 (H-11): sc-271364

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 the cell cycle by binding to cyclin-Cdk complexes and modulating their activity. Several Cdk proteins have been identified, including Cdk2-Cdk8, PCTAIRE-1-PCTAIRE-3, PITALRE and PITSLRE. Cdk6 is known to associate with cyclins D1, D2 and D3 and to be involved with the G_1/S transition of the cell cycle. Multiple inhibitors of Cdk6 have been identified, including p18 and p19. These inhibitors bind to both free and complexed Cdk6 and they inhibit the activity of the cyclin D-bound Cdk6.

REFERENCES

1. Okuda, T., et al. 1992. PCTAIRE-1 and PCTAIRE-2: two members of a novel Cdc2/Cdc28-related protein kinase gene family. Oncogene 7: 2249-2258.
2. Pines, J. 1994. The cell cycle kinases. Semin. Cancer Biol. 5: 305-313.

CHROMOSOMAL LOCATION

Genetic locus: CDK6 (human) mapping to 7q21.2.

SOURCE

Cdk6 (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 291-326 at the C-terminus of Cdk6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271364 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Cdk6 (H-11) is recommended for detection of Cdk6 of human origin by Western Blotting (starting dilution 1:100, 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 Cdk6 siRNA (h): sc-29264, Cdk6 shRNA Plasmid (h): sc-29264-SH and Cdk6 shRNA (h) Lentiviral Particles: sc-29264-V.

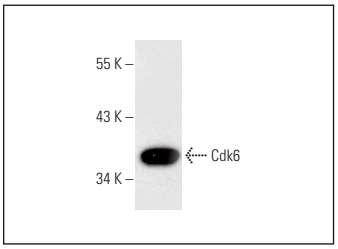
Molecular Weight of Cdk6: 40 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or Jurkat nuclear extract: sc-2132.

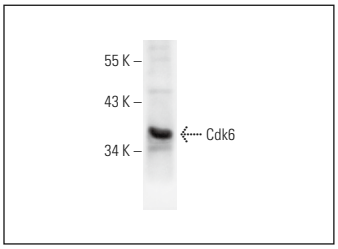
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cdk6 (H-11): sc-271364. Western blot analysis of Cdk6 expression in Jurkat whole cell lysate.



Cdk6 (H-11): sc-271364. Western blot analysis of Cdk6 expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Al-Khalaf, H.H., et al. 2011. $p16^{INK4a}$ positively regulates cyclin D1 and E2F1 through negative control of AUF1. PLoS ONE 6: e21111.
2. Akli, S., et al. 2012. Low molecular weight cyclin E is associated with p27-resistant, high-grade, high-stage and invasive bladder cancer. Cell Cycle 11: 1468-1476.
3. Pei, Y., et al. 2019. Ursolic acid suppresses the biological function of osteosarcoma cells. Oncol. Lett. 18: 2628-2638.
4. Fiskus, W., et al. 2019. Superior efficacy of cotreatment with BET protein inhibitor and Bcl2 or MCL1 inhibitor against AML blast progenitor cells. Blood Cancer J. 9: 4.
5. Ghram, M., et al. 2020. Staufen1 is essential for cell-cycle transitions and cell proliferation via the control of E2F1 expression. J. Mol. Biol. 432: 3881-3897.
6. Xue, Z., et al. 2020. Therapeutic evaluation of palbociclib and its compatibility with other chemotherapies for primary and recurrent nasopharyngeal carcinoma. J. Exp. Clin. Cancer Res. 39: 262.

RESEARCH USE

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

CONJUGATES

See **Cdk6 (DCS-83): sc-53638** for Cdk6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.