SANTA CRUZ BIOTECHNOLOGY, INC.

Cdk6 (DCS-90): sc-56282

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.

CHROMOSOMAL LOCATION

Genetic locus: CDK6 (human) mapping to 7q21.2; Cdk6 (mouse) mapping to 5 A1.

SOURCE

Cdk6 (DCS-90) is a mouse monoclonal antibody raised against full length Cdk6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdk6 (DCS-90) is recommended for detection of Cdk6 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); non cross-reactive with other Cdk types.

Suitable for use as control antibody for Cdk6 siRNA (h): sc-29264, Cdk6 siRNA (m): sc-35048, Cdk6 shRNA Plasmid (h): sc-29264-SH, Cdk6 shRNA Plasmid (m): sc-35048-SH, Cdk6 shRNA (h) Lentiviral Particles: sc-29264-V and Cdk6 shRNA (m) Lentiviral Particles: sc-35048-V.

Molecular Weight of Cdk6: 40 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

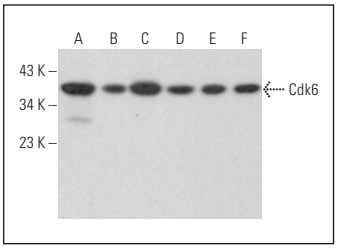
RECOMMENDED SUPPORT REAGENTS

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.

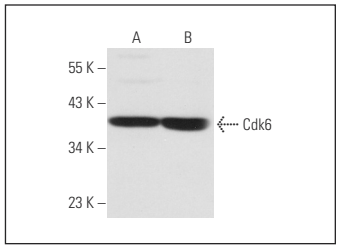
STORAGE

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

DATA



Cdk6 (DCS-90): sc-56282. Western blot analysis of Cdk6 expression in SCC-4 (**A**), HeLa (**B**), NIH/3T3 (**C**), C6 (**D**), NCI-H460 (**E**) and Raji (**F**) whole cell lysates.



Cdk6 (DCS-90): sc-56282. Western blot analysis of Cdk6 expression in K-562 (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wu, W., et al. 2009. Antibody array analysis with label-based detection and resolution of protein size. Mol. Cell. Proteomics 8: 245-257.
2. Zeng, Q., et al. 2009. Tgfbr1 haploinsufficiency is a potent modifier of colorectal cancer development. Cancer Res. 69: 678-686.
3. Schmitt, M.J., et al. 2012. Interferon-γ-induced activation of signal transducer and activator of transcription 1 (Stat1) up-regulates the tumor suppressing microRNA-29 family in melanoma cells. Cell Commun. Signal. 10: 41.
4. Buss, H., et al. 2012. Cyclin-dependent kinase 6 phosphorylates NFκB P65 at serine 536 and contributes to the regulation of inflammatory gene expression. PLoS ONE 7: e51847.
5. Liu, X., et al. 2012. Long non-coding RNA gadd7 interacts with TDP-43 and regulates Cdk6 mRNA decay. EMBO J. 31: 4415-4427.
6. Shen, T., et al. 2017. Ciclopirox inhibits cancer cell proliferation by suppression of Cdc25A. Genes Cancer 8: 505-516.
7. Yang, L., et al. 2017. Transcriptional co-activator with PDZ-binding motif overexpression promotes cell proliferation and transcriptional co-activator with PDZ-binding motif deficiency induces cell cycle arrest in neuroblastoma. Oncol. Lett. 13: 4295-4301.
8. Pericole, F.V., et al. 2019. BRD4 inhibition enhances azacitidine efficacy in acute myeloid leukemia and myelodysplastic syndromes. Front. Oncol. 9: 16.

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.