SANTA CRUZ BIOTECHNOLOGY, INC.

Cdk6 (B-10): sc-7961

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-1-3, 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 (B-10) is a mouse monoclonal antibody raised against amino acids 1-326 representing 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.

Cdk6 (B-10) is available conjugated to agarose (sc-7961 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7961 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7961 PE), fluorescein (sc-7961 FITC), Alexa Fluor® 488 (sc-7961 AF488), Alexa Fluor® 546 (sc-7961 AF546), Alexa Fluor® 594 (sc-7961 AF594) or Alexa Fluor® 647 (sc-7961 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7961 AF680) or Alexa Fluor® 790 (sc-7961 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Cdk6 (B-10) is available conjugated to TRITC (sc-7961 TRITC, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

Cdk6 (B-10) 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), immunohistochemistry (including paraffin-embedded sections) (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 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.

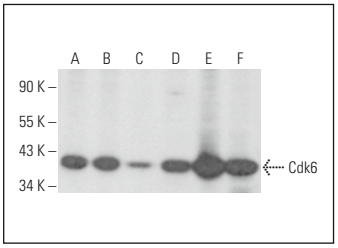
Molecular Weight of Cdk6: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NCI-H460 whole cell lysate: sc-364235 or Raji whole cell lysate: sc-364236.

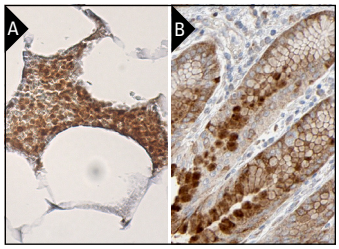
STORAGE

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

DATA



Cdk6 (B-10): sc-7961. Western blot analysis of Cdk6 expression in HeLa (**A**), NCI-H460 (**B**), HEK293T (**C**), Raji (**D**), CCRF-CEM (**E**) and SCC-4 (**F**) whole cell lysates.



Cdk6 (B-10): sc-7961. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing nuclear and cytoplasmic staining of hematopoietic cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing nuclear and cytoplasmic staining of glandular cells on top of gastric pits. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Sinibaldi, D., et al. 2000. Induction of $p21^{WAF1/Cip1}$ and cyclin D1 expression by the Src oncoprotein in mouse fibroblasts: role of activated Stat3 signaling. Oncogene 19: 5419-5427.
2. Dumitrescu, A., et al. 2014. Placental estrogen suppresses cyclin D1 expression in the nonhuman primate fetal adrenal cortex. Endocrinology 155: 4774-4784.
3. Laurenti, E., et al. 2015. Cdk6 levels regulate quiescence exit in human hematopoietic stem cells. Cell Stem Cell 16: 302-313.
4. Jagadish, N., et al. 2016. Sperm-associated antigen 9 (SPAG9) promotes the survival and tumor growth of triple-negative breast cancer cells. Tumour Biol. 37: 13101-13110.
5. Chen, L., et al. 2017. circRNA_100290 plays a role in oral cancer by functioning as a sponge of the miR-29 family. Oncogene 36: 4551-4561.
6. Hee, Y.T., et al. 2018. LEE011 and ruxolitinib: a synergistic drug combination for natural killer/T-cell lymphoma (NKTCL). Oncotarget 9: 31832-31841.
7. Tang, W., et al. 2019. The p300/YY1/miR-500a-5p/HDAC2 signalling axis regulates cell proliferation in human colorectal cancer. Nat. Commun. 10: 663.
8. Godavarthy, P.S., et al. 2020. The vascular bone marrow niche influences outcome in chronic myeloid leukemia via the E-selectin-SCL/TAL1-CD44 axis. Haematologica 105: 136-147.

RESEARCH USE

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