

Cdk6 (F-7): sc-390493

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 G₁/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 (F-7) is a mouse monoclonal antibody raised against amino acids 230-326 mapping at the C-terminus of Cdk6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdk6 (F-7) is recommended for detection of Cdk6 of mouse, rat and 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 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: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or Raji whole cell lysate: sc-364236.

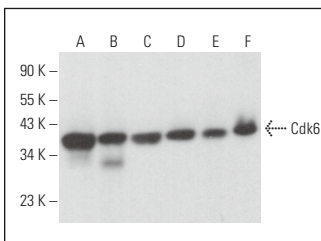
RECOMMENDED SUPPORT REAGENTS

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.

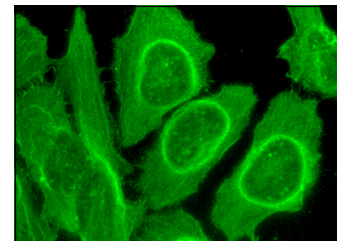
STORAGE

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

DATA



Cdk6 (F-7): sc-390493. Western blot analysis of Cdk6 expression in Jurkat (A), SCC-4 (B), Raji (C), NIH/3T3 (D), C6 (E) and 3T3-L1 (F) whole cell lysates.



Cdk6 (F-7): sc-390493. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic, membrane and nuclear localization.

SELECT PRODUCT CITATIONS

- Lu, X., et al. 2013. Downregulation of gas5 increases pancreatic cancer cell proliferation by regulating Cdk6. *Cell Tissue Res.* 354: 891-896.
- Li, C., et al. 2015. H19 derived microRNA-675 regulates cell proliferation and migration through Cdk6 in glioma. *Am. J. Transl. Res.* 7: 1747-1764.
- Guo, B., et al. 2016. Naringin suppresses the metabolism of A375 cells by inhibiting the phosphorylation of c-Src. *Tumour Biol.* 37: 3841-3850.
- Pan, Y., et al. 2016. miR-646 is a key negative regulator of EGFR pathway in lung cancer. *Exp. Lung Res.* 42: 286-295.
- Na, K., et al. 2020. Potential regulatory role of human-carboxylesterase-1 glycosylation in liver cancer cell growth. *J. Proteome Res.* 19: 4867-4883.
- Gao, L., et al. 2021. Integrative analysis the characterization of peroxiredoxins in pan-cancer. *Cancer Cell Int.* 21: 366.
- Agborbesong, E., et al. 2024. Overexpression of SMYD3 promotes autosomal dominant polycystic kidney disease by mediating cell proliferation and genome instability. *Biomedicines* 12: 603.

RESEARCH USE

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

PROTOCOLS

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



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.