

p-Cdk6 (Tyr 24): sc-293097

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.

REFERENCES

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- MacLachlan, T.K., et al 1995. Cyclins, cyclin-dependent kinases and Cdk inhibitors: implications in cell cycle control and cancer. *Crit. Rev. Eukaryot. Gene Expr.* 5: 127-156.
- Lucas, J.J., et al. 1995. Regulation of synthesis and activity of the PLSTIRE protein (cyclin-dependent kinase 6 (Cdk6)), a major cyclin D-associated Cdk4 homologue in normal human T lymphocytes. *J. Immunol.* 154: 6275-6284.
- Hirai, H., et al. 1995. Novel INK4 proteins, p19 and p18, are specific inhibitors of the cyclin D-dependent kinases Cdk4 and Cdk6. *Mol. Cell. Biol.* 15: 2672-2681.
- Chan, F.K., et al. 1995. Identification of human and mouse p19, a novel Cdk4 and Cdk6 inhibitor with homology to p16INK4. *Mol. Cell. Biol.* 15: 2682-2688.
- Siebert, R., et al. 1996. Role of the cyclin-dependent kinase 4 and 6 inhibitor gene family p15, p16, p18 and p19 in leukemia and lymphoma. *Leuk. Lymphoma* 23: 505-520.

CHROMOSOMAL LOCATION

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

SOURCE

p-Cdk6 (Tyr 24) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 24 of Cdk6 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

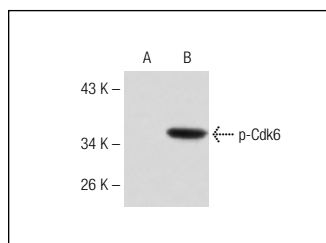
p-Cdk6 (Tyr 24) is recommended for detection of Tyr 24 phosphorylated Cdk6 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of p-Cdk6: 40 kDa.

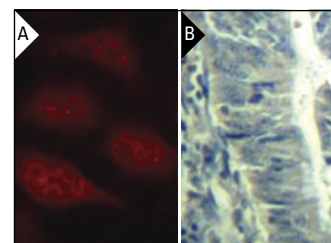
RECOMMENDED SECONDARY REAGENTS

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 Blotting B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-Cdk6 (Tyr 24): sc-293097. Western blot analysis of Cdk6 phosphorylation expression in untreated (A) and serum-starved treated (B) 293 whole cell lysates.



p-Cdk6 (Tyr 24): sc-293097. Immunofluorescence staining of methanol-fixed HeLa cells (A) showing nuclear and cytoplasmic localization and immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue (B) showing nuclear and cytoplasmic localization.

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.