Cdk4 (DCS-35): sc-23896

**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 PITSILRE. Cdk4, in complex with D-type cyclins, is thought to regulate cell growth during the G1 phase of the cell cycle. This association with a D-type cyclin upregulates Cdk4 activity, whereas binding to the Cdk inhibitor p16 downregulates Cdk4 activity. Activation of the Cdk4-cyclin complex requires phosphorylation on a single threonyl residue of Cdk4, catalyzed by a Cdk-activating protein (CAK).

**CHROMOSOMAL LOCATION**

Genetic locus: Cdk4 (human) mapping to 12q14.1; Cdk4 (mouse) mapping to 10 D3.

**SOURCE**

Cdk4 (DCS-35) is a mouse monoclonal antibody raised against full length recombinant human Cdk4, with epitope mapping to amino acids 1-20.

**PRODUCT**

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

Cdk4 (DCS-35) is available conjugated to agarose (sc-23896 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23896 HRP), 200 µg/ml, for WB, IHC and ELISA; to either phycoerythrin (sc-23896 PE), fluorescein (sc-23896 FITC), Alexa Fluor® 488 (sc-23896 AF488), Alexa Fluor® 546 (sc-23896 AF546), Alexa Fluor® 594 (sc-23896 AF594) or Alexa Fluor® 647 (sc-23896 AF647), 200 µg/ml, for WB (RGB), IF, IHC and FCM; and to either Alexa Fluor® 680 (sc-23896 AF680) or Alexa Fluor® 790 (sc-23896 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**APPLICATIONS**

Cdk4 (DCS-35) is recommended for detection of Cdk4 of mouse, rat and human origin by Western Blotting (starting dilution 1:1,000, dilution range 1:1,000-1:2,000), 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 Cdk4 siRNA (h): sc-29261, Cdk4 siRNA (m): sc-29262, Cdk4 shRNA Plasmid (h): sc-29261-SH, Cdk4 shRNA Plasmid (m): sc-29262-SH, Cdk4 shRNA (h) Lentiviral Particles: sc-29261-V and Cdk4 shRNA (m) Lentiviral Particles: sc-29262-V.

Molecular Weight of Cdk4: 34 kDa.

Positive Controls: F9 cell lysate: sc-2245, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

**STORAGE**

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

**DATA**

Cdk4 (DCS-35) Alexa Fluor® 488: sc-23896 AF488. Direct fluorescent western blot analysis of Cdk4 expression in HeLa (A) and F9 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-23896-AF488. Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 680: sc-516730.


**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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