SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc45 (C-20): sc-9298

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell cycle events are regulated by the sequential activation and deactivation of cyclin dependent kinases (Cdks) and by the proteolysis of cyclins. The cell division cycle (Cdc) genes are required at various points in the cell cycle. Cdc25A, Cdc25B and Cdc25C protein Tyrosine phosphatases function as mitotic activators by dephosphorylating Cdc2 p34 on regulatory Tyrosine residues. Cdc6 is the human homolog of *Saccharomyces cerevisiae* Cdc6, which is involved in the initiation of DNA replication. Cdc37 appears to facilitate Cdk4/cyclin D1 complex formation and has been shown to form a stable complex with HSP 90. Cdc34, Cdc27 and Cdc16 function as ubiquitin-conjugating enzymes. Cdc34 is thought to be the structural and functional homolog of *Saccharomyces cerevisiae* Cdc34, which is essential for the G_1 to S phase transition. Cdc16 and Cdc27 are components of the APC (anaphase-promoting complex) which ubiquitinates cyclin B, resulting in cyclin B/Cdk complex degradation.

CHROMOSOMAL LOCATION

Genetic locus: CDC45L (human) mapping to 22q11.21; Cdc45l (mouse) mapping to 16 A3.

SOURCE

Cdc45 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cdc45 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9298 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Cdc45 (C-20) is recommended for detection of Cdc45 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).

Cdc45 (C-20) is also recommended for detection of Cdc45 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Cdc45 siRNA (h): sc-35044, Cdc45 siRNA (m): sc-35045, Cdc45 shRNA Plasmid (h): sc-35044-SH, Cdc45 shRNA Plasmid (m): sc-35045-SH, Cdc45 shRNA (h) Lentiviral Particles: sc-35044-V and Cdc45 shRNA (m) Lentiviral Particles: sc-35045-V.

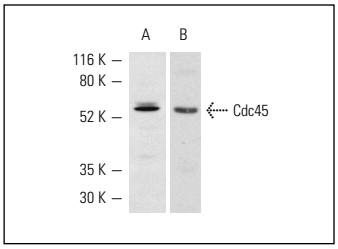
Molecular Weight of Cdc45: 60 kDa.

Positive Controls: A-431 nuclear extract: sc-2122, HeLa whole cell lysate: sc-2200 or HeLa nuclear extract: sc-2120.

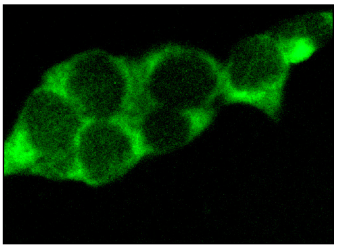
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Western blot analysis of Cdc45 expression in A-431 (**A**) and HeLa (**B**) nuclear extracts. Antibodies tested include: Cdc45 (C-20): sc-9298 (**A**) and Cdc45 (H-300): sc-20685 (**B**).



Cdc45 (C-20): sc-9298. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic and nuclear staining.

STORAGE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **Cdc45 (G-12): sc-55569** or **Cdc45 (E-3): sc-55568**, our highly recommended monoclonal alternatives to Cdc45 (C-20).