

Cdc123 (C-14): sc-164009

BACKGROUND

The eukaryotic cell division cycle consists of a number of gene-controlled sequences that involve cyclin dependent kinases (Cdks) and cell division control (Cdc) proteins. Cdc123 (cell division cycle protein 123), also known as D123, is a 336 amino acid cytoplasmic protein that is involved in cell cycle control. Widely expressed with high expression in thymus, spleen, ovary, testis, small intestine and leukocytes, Cdc123 functions to destabilize Chfr (checkpoint with forkhead and RING finger domain) proteins which, when accumulated, block the G to S phase transition. Cdc123 prevents the Chfr proteins from collecting in the cell, thereby allowing the cell to enter the S phase. Due to its role in cell cycle control, Cdc123 is thought to be a basal marker for luminal breast cancers.

REFERENCES

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- Okuda, A., Ohtsu, M. and Kimura, G. 1999. Extensive degradation of mutant-type D123 protein is responsible for temperature-sensitive proliferation inhibition in 3Y1tsD123 cells. *Cell. Struct. Funct.* 24: 443-449.
- Liu, L.X., Heveker, N., Fackler, O.T., Arold, S., Le Gall, S., Janvier, K., Peterlin, B.M., Dumas, C., Schwartz, O., Benichou, S. and Benarous, R. 2000. Mutation of a conserved residue (D123) required for oligomerization of human immunodeficiency virus type 1 Nef protein abolishes interaction with human thioesterase and results in impairment of Nef biological functions. *J. Virol.* 74: 5310-5319.
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- Biegenowski, P., Shilinski, K., Tschlis, P.N. and Brenner, C. 2004. Cdc123 and checkpoint forkhead associated with RING proteins control the cell cycle by controlling eIF2 γ abundance. *J. Biol. Chem.* 279: 44656-44666.

CHROMOSOMAL LOCATION

Genetic locus: CDC123 (human) mapping to 10p13; Cdc123 (mouse) mapping to 2 A1.

SOURCE

Cdc123 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cdc123 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-164009 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cdc123 (C-14) is recommended for detection of Cdc123 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with other Cdc family members.

Cdc123 (C-14) is also recommended for detection of Cdc123 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Cdc123 siRNA (h): sc-90774, Cdc123 siRNA (m): sc-142205, Cdc123 shRNA Plasmid (h): sc-90774-SH, Cdc123 shRNA Plasmid (m): sc-142205-SH, Cdc123 shRNA (h) Lentiviral Particles: sc-90774-V and Cdc123 shRNA (m) Lentiviral Particles: sc-142205-V.

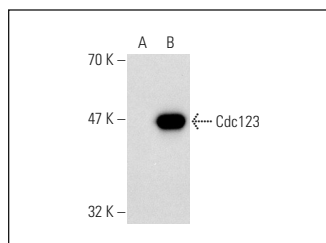
Molecular Weight of Cdc123: 39 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182 or Cdc123 (m3): 293T Lysate: sc-126610.

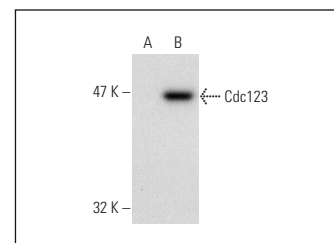
RECOMMENDED SECONDARY REAGENTS

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



Cdc123 (C-14): sc-164009. Western blot analysis of Cdc123 expression in non-transfected: sc-117752 (A) and mouse Cdc123 transfected: sc-126610 (B) 293T whole cell lysates.



Cdc123 (C-14): sc-164009. Western blot analysis of Cdc123 expression in non-transfected: sc-117752 (A) and mouse Cdc123 transfected: sc-126609 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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