

# cyclin Y (N-20): sc-242538

## BACKGROUND

Cell proliferation is controlled at specific stages of the cell cycle by distinct protein kinase complexes. These complexes consist of a catalytic subunit associating with a specific regulatory subunit to form the active kinase. The cyclins, which include cyclin A, B, C, D, E, F, G, H, I, K, L, T and their related proteins, including Dbf4, comprise the regulatory subunits of these kinase complexes. The controlled activation of the kinase complexes at various intervals of the cell cycle is regulated by the availability of the cyclins to the catalytic subunit. Unlike the catalytic subunit, which is expressed continually, the expression and stability of the regulatory subunit fluctuates depending on the stage of the cell cycle and, thereby, regulates the kinase activity. Cyclin Y, also known as CKNX, CFP1, CBCP1 or CCNY, is a 341 amino acid protein belonging to the cyclin family. Cyclin Y exists as three alternatively spliced isoforms and contains a cyclin N-terminal domain. Cyclin Y may control cell division cycles and regulate cyclin-dependent kinases.

## REFERENCES

- Gallant, P., et al. 1994. Identification of a novel vertebrate cyclin: cyclin B3 shares properties with both A- and B-type cyclins. *EMBO J.* 13: 595-605.
- Mikulits, W., et al. 1997. Dynamics of cell cycle regulators: artifact-free analysis by recultivation of cells synchronized by centrifugal elutriation. *DNA Cell Biol.* 16: 849-859.
- Kolonin, M.G., et al. 2000. A role for cyclin J in the rapid nuclear division cycles of early *Drosophila embryogenesis*. *Dev. Biol.* 227: 661-672.
- Kong, M., et al. 2000. Cyclin F regulates the nuclear localization of cyclin B1 through a cyclin-cyclin interaction. *EMBO J.* 19: 1378-1388.
- Malara, N.M., et al. 2006. Ageing, hormonal behaviour and cyclin D1 in ductal breast carcinomas. *Breast* 15: 81-89.
- Wikman, H., et al. 2006. Regulation of the G<sub>1</sub>/S phase of the cell cycle and alterations in the RB pathway in human lung cancer. *Expert Rev. Anticancer Ther.* 6: 515-530.
- Franke, A., et al. 2008. Replication of signals from recent studies of Crohn's disease identifies previously unknown disease loci for ulcerative colitis. *Nat. Genet.* 40: 713-715.

## CHROMOSOMAL LOCATION

Genetic locus: CCNY (human) mapping to 10p11.21; Ccny (mouse) mapping to 18 A1.

## SOURCE

cyclin Y (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of cyclin Y 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-242538 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

cyclin Y (N-20) is recommended for detection of cyclin Y 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); non cross-reactive with other cyclin family members.

cyclin Y (N-20) is also recommended for detection of cyclin Y in additional species, including avian.

Suitable for use as control antibody for cyclin Y siRNA (h): sc-90833, cyclin Y siRNA (m): sc-142658, cyclin Y shRNA Plasmid (h): sc-90833-SH, cyclin Y shRNA Plasmid (m): sc-142658-SH, cyclin Y shRNA (h) Lentiviral Particles: sc-90833-V and cyclin Y shRNA (m) Lentiviral Particles: sc-142658-V.

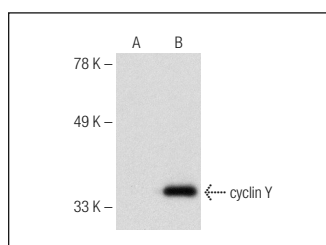
Molecular Weight of cyclin Y: 39 kDa.

Positive Controls: cyclin Y (m): 293T Lysate: sc-119552.

## 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



cyclin Y (N-20): sc-242538. Western blot analysis of cyclin Y expression in non-transfected: sc-117752 (A) and mouse cyclin Y transfected: sc-119552 (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.