SANTA CRUZ BIOTECHNOLOGY, INC.

cyclin O (H-267): sc-68886

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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, O, T and their related proteins, 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, thereby regulating kinase activity. Cyclin O, also known as CCNO, is a 350 amino acid protein that belongs to the cyclin family and is encoded by a gene located on human chromosome 5. Cyclin O may play an important role in oocyte meiotic cell cycle.

REFERENCES

1. Gallant, P. and Nigg, E.A. 1994. Identification of a novel vertebrate cyclin: cyclin B3 shares properties with both A- and B-type cyclins. EMBO J. 13: 595-605.
2. 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.
3. Kolonin, M.G. and Finley, R.L. 2000. A role for cyclin J in the rapid nuclear division cycles of early *Drosophila* embryogenesis. Dev. Biol. 227: 661-672.
4. Kong, M., et al. 2000. Cyclin F regulates the nuclear localization of cyclin B1 through a cyclin-cyclin interaction. EMBO J. 19: 1378-1388.
5. Wikman, H. and Kettunen, E. 2006. Regulation of the G_1/S phase of the cell cycle and alterations in the RB pathway in human lung cancer. Expert. Rev. Anticancer Ther. 6: 515-530.
6. Roig, M.B., et al. 2009. Identification of a novel cyclin required for the intrinsic apoptosis pathway in lymphoid cells. Cell Death Differ. 16: 230-243.

CHROMOSOMAL LOCATION

Genetic locus: CCNO (human) mapping to 5q11.2; Ccno (mouse) mapping to 13 D2.2.

SOURCE

cyclin O (H-267) is a rabbit polyclonal antibody raised against amino acids 1-267 mapping at the N-terminus of cyclin O 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68886 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

cyclin O (H-267) is recommended for detection of cyclin O 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).

cyclin O (H-267) is also recommended for detection of cyclin O in additional species, including equine, canine, bovine and porcine.

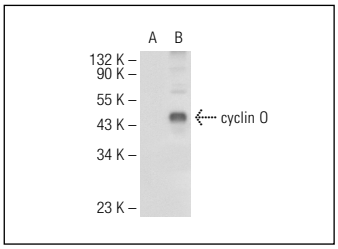
Suitable for use as control antibody for cyclin O siRNA (h): sc-76802, cyclin O siRNA (m): sc-76803, cyclin O shRNA Plasmid (h): sc-76802-SH, cyclin O shRNA Plasmid (m): sc-76803-SH, cyclin O shRNA (h) Lentiviral Particles: sc-76802-V and cyclin O shRNA (m) Lentiviral Particles: sc-76803-V.

cyclin O (H-267) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of cyclin O: 38 kDa.

Positive Controls: cyclin O (h): 293T Lysate: sc-173001.

DATA



cyclin O (H-267): sc-68886. Western blot analysis of cyclin O expression in non-transfected: sc-117752 (**A**) and human cyclin O transfected: sc-173001 (**B**) 293T whole cell lysates.

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.