SANTA CRUZ BIOTECHNOLOGY, INC.

p55 CDC (C-19): sc-1906

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Cyclins, regulatory subunits which associate with kinases, control many of the important steps in cell cycle progression. The Cdc2 protein kinase ($p34^{Cdc2}$) exhibits protein kinase activity *in vitro* and exists in a complex with both cyclin B and a protein homologous to p13SUC1. Cdc2 kinase is the active subunit of the M phase promoting factor (MPF) and the M phase-specific Histone H1 kinase. The p34Cdc2/cyclin B complex is required for the G_2 to M transition. An additional cell cycle-dependent protein kinase termed p55 CDC exhibits a high degree of homology with the *S. cerevisiae* proteins Cdc20 and Cdc4. The p55 CDC transcript is readily detectable in a variety of cultured cell lines in growth phase, but disappears when cell growth is chemically arrested. p55 CDC shows kinase activity towards α-casein and Myelin basic protein.

CHROMOSOMAL LOCATION

Genetic locus: CDC20 (human) mapping to 1p34.2; Cdc20 (mouse) mapping to 4 D2.1.

SOURCE

p55 CDC (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of p55 CDC 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-1906 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p55 CDC (C-19) is recommended for detection of p55 CDC 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), 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).

p55 CDC (C-19) is also recommended for detection of p55 CDC in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for p55 CDC siRNA (h): sc-36160, p55 CDC siRNA (m): sc-36159, p55 CDC shRNA Plasmid (h): sc-36160-SH, p55 CDC shRNA Plasmid (m): sc-36159-SH, p55 CDC shRNA (h) Lentiviral Particles: sc-36160-V and p55 CDC shRNA (m) Lentiviral Particles: sc-36159-V.

Molecular Weight of p55 CDC: 55 kDa.

Positive Controls: Ramos cell lysate: sc-2216, U-937 cell lysate: sc-2239 or HL-60 whole cell lysate: sc-2209.

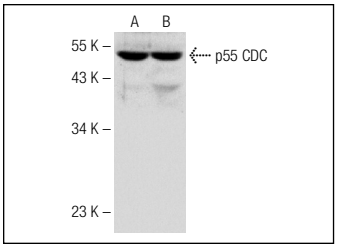
STORAGE

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

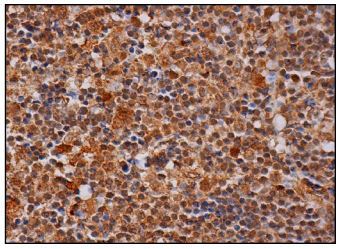
RESEARCH USE

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

DATA



p55 CDC (C-19): sc-1906. Western blot analysis of p55 CDC expression in Ramos (**A**) and U-937 (**B**) whole cell lysates.



p55 CDC (C-19): sc-1906. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and nuclear staining of cells in germinal centers and cells in non-germinal centers.

SELECT PRODUCT CITATIONS

1. Fang, G., et al. 1998. The checkpoint protein MAD2 and the mitotic regulator Cdc20 form a ternary complex with the anaphase-promoting complex to control anaphase initiation. Genes Dev. 12: 1871-1883.
2. Tang, Z., et al. 2001. MAD2-independent inhibition of APCCdc20 by the mitotic checkpoint protein BubR1. Dev. Cell 1: 227-237.
3. Crawford, D., et al. 2001. The G_2 DNA damage checkpoint delays expression of genes encoding mitotic regulators. J. Biol. Chem. 276: 37166-37177.
4. Mailand, N., et al. 2005. CDKs promote DNA replication origin licensing in human cells by protecting Cdc6 from APC/C-dependent proteolysis. Cell 122: 915-926.
5. Mondal, G., et al. 2006. A new MAD2-interacting domain of Cdc20 is critical for the function of MAD2-Cdc20 complex in the spindle assembly checkpoint. Biochem. J. 396: 243-253.
6. Hochegger, H., et al. 2007. An essential role for Cdk1 in S phase control is revealed via chemical genetics in vertebrate cells. J. Cell Biol. 178: 257-268.
7. Lee, J., et al. 2009. DNA damage triggers $p21^{WAF1}$-dependent Emi1 down-regulation that maintains G_2 arrest. Mol. Biol. Cell 20: 1891-1902.

PROTOCOLS

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