SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc25C (TC-19): sc-56270

BACKGROUND

Cell cycle events are regulated by the sequential activation and deactivation of cyclin-dependent kinases (Cdks), including Cdk2 and Cdc2. Cdk2, in complexes with cyclin E and cyclin A, appears necessary for the onset and progression of DNA replication, while the Cdc2 kinase, in complexes with cyclin A or cyclin B, is required for the initiation of cell division. Wee 1 has been identified as a protein kinase that suppresses the entry into mitosis by mediating inhibiting tyrosine phosphorylation of Cdc2 p34. In contrast, members of the Cdc25 family of protein phosphatases function as mitotic activators by dephosphorylation of Cdc2 p34 on regulatory tyrosine and possibly threonine residues. The Cdc25 gene family consists of at least three members that share approximately 40% identity in their most conserved carboxy-terminal sequences.

REFERENCES

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5. Parker, L.L. and Piwnica-Worms, H. 1992. Inactivation of the p34Cdc2-cyclin B complex by the human Wee 1 tyrosine kinase. Science 257: 1955-1957.
6. Girard, F., Strausfeld, U., Cavadore, J.C., Russell, P., Fernandez, A. and Lamb, N.J. 1992. Cdc25 is a nuclear protein expressed constitutively throughout the cell cycle in nontransformed mammalian cells. J. Cell Biol. 118: 785-794.
7. Coleman, T.R., Tang, Z. and Dunphy, W.G. 1993. Negative regulation of the Wee 1 protein kinase by direct action of the Nim1/Cdr1 mitotic inducer. Cell 72: 919-929.
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CHROMOSOMAL LOCATION

Genetic locus: CDC25C (human) mapping to 5q31; Cdc25c (mouse) mapping to 18 B1.

SOURCE

Cdc25C (TC-19) is a mouse monoclonal antibody raised against amino acids 1-258 of Cdc25C of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdc25C (TC-19) is recommended for detection of Cdc25C of 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Cdc25C siRNA (h): sc-35038.

Molecular Weight of Cdc25C: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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