SANTA CRUZ BIOTECHNOLOGY, INC.

Cks1/2 (D-19): sc-12986

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Cdc2 p34-cyclin B complex plays a critical role in the cell cycle by regulating the G2 to M phase transition. Also referred to as M phase promoting factor or MPF, this complex is a required component of the cell cycle machinery and is necessary for cell entry into mitosis. The Cdc28 protein represents the *S. cerevisiae* counterpart of human Cdc2 p34 and has been found complexed to a regulatory protein, termed p13suc 1, in addition to cyclin B. Two proteins associated with the Cdc2 p34-cyclin B complex are called Cks1 and Cks2. Null mutations in the p13suc 1 and Cks1 genes result in the arrest of the cell cycle at either the G_1 or G_2 phase, suggesting that the proteins may also regulate the activity of cyclin dependent kinases that act at critical points early in the cell cycle. Cks2 (cyclin-dependent kinases regulatory subunit 2) is a 79 amino acid protein that binds to the catalytic subunit of cyclin-dependent kinases, such as those in the Cdc2 p34-cyclin B complex. An essential component of this cyclin/cyclin-dependent kinase complex, Cks2 contributes to cell cycle control and is able to form a homohexamer that can bind up to six subunits. Without proper activity of Cks2, the first metaphase/anaphase transition of meiosis cannot occur.

CHROMOSOMAL LOCATION

Genetic locus: CKS1B (human) mapping to 1q21.3, CKS2 (human) mapping to 9q22.2; Cks1b (mouse) mapping to 3 F1, Cks2 (mouse) mapping to 13 A5.

SOURCE

Cks1/2 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Cks1 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-12986 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Cks1/2 (D-19) is recommended for detection of Cks1 and Cks2 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).

Cks1/2 (D-19) is also recommended for detection of Cks1 and Cks2 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Cks1: 9 kDa.

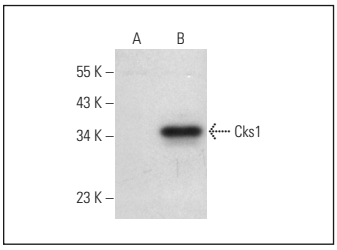
Molecular Weight of Cks2: 10 kDa.

Positive Controls: Cks1 (h): 293T Lysate: sc-171279.

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



Cks1/2 (D-19): sc-12986. Western blot analysis of Cks1 expression in non-transfected: sc-117752 (**A**) and human Cks1 transfected: sc-171279 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ouellet, V., et al. 2005. Discrimination between serous low malignant potential and invasive epithelial ovarian tumors using molecular profiling. Oncogene 24: 4672-4687.
2. Ouellet, V., et al. 2006. Tissue array analysis of expression microarray candidates identifies markers associated with tumor grade and outcome in serous epithelial ovarian cancer. Int. J. Cancer 119: 599-607.
3. Borriello, A., et al. 2006. Retinoic acid induces $p27^{Kip1}$ nuclear accumulation by modulating its phosphorylation. Cancer Res. 66: 4240-4248.

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.