

Cks1 (h): 293T Lysate: sc-171279

BACKGROUND

The Cdc2 p34-cyclin B complex plays a critical role in the cell cycle by regulating the G₂ to M 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 p13suc1, in addition to cyclin B. The human homolog of p13suc1 has been identified and designated Cks1 p9. Null mutations in the p13suc1 and Cks1 p9 genes result in the arrest of the cell cycle at either the G₁ or G₂ phase, suggesting that the proteins may also regulate the activity of cyclin dependent kinases that act at critical points early in the cell cycle.

REFERENCES

1. Draetta, G., et al. 1987. Identification of p34 and p13, human homologs of the cell cycle regulators of fission yeast encoded by Cdc2⁺ and suc1⁺. Cell 50: 319-325.
2. Dunphy, W.G., et al. 1988. The *Xenopus* Cdc2 protein is a component of MPF, a cytoplasmic regulator of mitosis. Cell 54: 423-431.
3. Arion, D., et al. 1988. Cdc2 is a component of the M phase-specific Histone H1 kinase: evidence for identity with MPF. Cell 55: 371-378.
4. Morla, A.O., et al. 1989. Reversible tyrosine phosphorylation of Cdc2: dephosphorylation accompanies activation during entry into mitosis. Cell 58: 193-203.
5. Pines, J., et al. 1989. Isolation of a human cyclin cDNA: evidence for cyclin mRNA and protein regulation in the cell cycle and for interaction with p34^{Cdc2}. Cell 58: 833-846.
6. Jessus, C., et al. 1992. Oscillation of MPF is accompanied by periodic association between Cdc25 and Cdc2-cyclin B. Cell 68: 323-332.
7. Egan, E.A. and Solomon, M.J. 1998. Cyclin-stimulated binding of Cks proteins to cyclin-dependent kinases. Mol. Cell. Biol. 18: 3659-3667.
8. Spruck, C.H., et al. 2003. Requirement of Cks2 for the first metaphase/anaphase transition of mammalian meiosis. Science 300: 647-650.

CHROMOSOMAL LOCATION

Genetic locus: CKS1B (human) mapping to 1q21.3.

PRODUCT

Cks1 (h): 293T Lysate represents a lysate of human Cks1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

Cks1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Cks1 antibodies. Recommended use: 10-20 µl per lane.

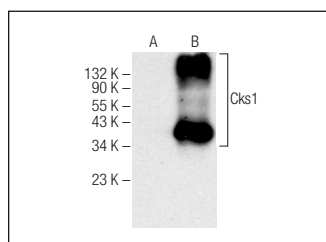
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Cks1/2 (F-12): sc-376663 is recommended as a positive control antibody for Western Blot analysis of enhanced human Cks1 expression in Cks1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Cks1/2 (F-12): sc-376663. Western blot analysis of Cks1 expression in non-transfected: sc-117752 (A) and human Cks1 transfected: sc-171279 (B) 293T whole cell lysates.

RESEARCH USE

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