



cyclin B1 (1-433): sc-4073 WB

BACKGROUND

In eukaryotic cells, mitosis is initiated following the activation of a protein kinase known variously as maturation promoting factor, M phase specific histone kinase or M-phase kinase. This protein kinase is composed of a catalytic subunit (Cdc2), a regulatory subunit (cyclin B), and a low molecular weight subunit (Suc 1 p13). The Cdc/cyclin enzyme is subject to multiple levels of control, of which the regulation of the catalytic subunit by tyrosine phosphorylation is the best understood. Tyrosine phosphorylation inhibits the Cdc2/cyclin B enzyme, and tyrosine dephosphorylation, occurring at the onset of mitosis, directly activates the pre-MPF complex. Evidence has established that B-type cyclins not only act on M phase regulatory subunits of the Cdc2 protein kinase, but also activate the Cdc25A and Cdc25B endogenous tyrosine phosphatase, of which Cdc2 is the physiological substrate. The specificity of this effect is shown by the inability of either cyclin A or cyclin D1 to display any such stimulation of Cdc25A or Cdc25B.

REFERENCES

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SOURCE

cyclin B1 (1-433) is expressed in *E. coli* as an 81 kDa tagged fusion protein and 45 kDa fragment corresponding to amino acids 1-433 representing full length cyclin B1 of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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

PRODUCT

cyclin B1 (1-433) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg protein in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

cyclin B1 (1-433) is suitable as a Western blotting control for sc-245, sc-594, sc-595, sc-752 and sc-7393.