

# Wee 1 (C-20): sc-325

## BACKGROUND

Phosphorylation of Cdc2 on threonine 14 and tyrosine 15 is required to maintain Cdc2 in an inactive state throughout the S and G<sub>2</sub> phases of the cell cycle. The human Wee 1 protein, Wee 1 Hu, encodes a tyrosine-specific protein kinase that phosphorylates Cdc2 on tyrosine 15. Myt 1, a member of the Wee 1 family of protein kinases, has been shown to phosphorylate Cdc2 on both threonine 14 and tyrosine 15 in a cyclin-dependent manner. Activity of both Wee 1 Hu and Myt 1 is regulated during the cell cycle, suggesting that both proteins play a role in mitotic control. Dephosphorylation of Cdc2 on threonine 14 and tyrosine 15 in late G<sub>2</sub> by Cdc25 then activates the Cdc2/cyclin B complex to allow entry into mitosis.

## CHROMOSOMAL LOCATION

Genetic locus: WEE1 (human) mapping to 11p15.4; Wee1 (mouse) mapping to 7 E1.

## SOURCE

Wee 1 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Wee 1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-325 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose (sc-325 AC) conjugate for immunoprecipitation, 500 µg/0.25 ml agarose in 1 ml.

## APPLICATIONS

Wee 1 (C-20) is recommended for detection of Wee 1 p98 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).

Wee 1 (C-20) is also recommended for detection of Wee 1 p98 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Wee 1 siRNA (h): sc-36835, Wee 1 siRNA (m): sc-36836, Wee 1 shRNA Plasmid (h): sc-36835-SH, Wee 1 shRNA Plasmid (m): sc-36836-SH, Wee 1 shRNA (h) Lentiviral Particles: sc-36835-V and Wee 1 shRNA (m) Lentiviral Particles: sc-36836-V.

Molecular Weight of Wee 1: 94 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, K-562 nuclear extract: sc-2130 or BJAB whole cell lysate: sc-2207.

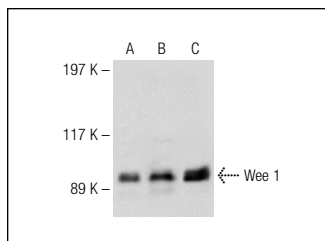
## STORAGE

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

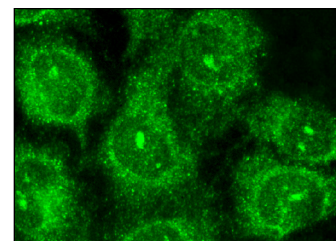
## RESEARCH USE

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

## DATA



Wee 1 (C-20): sc-325. Western blot analysis of Wee 1 in Jurkat (A) and K-562 (B) nuclear extracts and BJAB (C) whole cell lysate



Wee 1 (C-20): sc-325. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Chan, T.A., et al. 1999. 14-3-3 $\sigma$  is required to prevent mitotic catastrophe after DNA damage. *Nature* 401: 616-620.
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- Jia, L., et al. 2011. Induction of p21-dependent senescence by an NAE inhibitor, MLN4924, as a mechanism of growth suppression. *Neoplasia* 13: 561-569.
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- Lian, G., et al. 2012. Filamin A regulates neural progenitor proliferation and cortical size through Wee1-dependent Cdk1 phosphorylation. *J. Neurosci.* 32: 7672-7684.
- Yang, D., et al. 2012. The p21-dependent radiosensitization of human breast cancer cells by MLN4924, an investigational inhibitor of NEDD8 activating enzyme. *Plos ONE* 7: e34079.
- Chow, J.P. and Poon, R.Y. 2012. The CDK1 inhibitory kinase MYT1 in DNA damage checkpoint recovery. *Oncogene* 32: 4778-4788.



Try **Wee 1 (B-11): sc-5285**, our highly recommended monoclonal alternative to Wee 1 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Wee 1 (B-11): sc-5285**.