Revision 14

Store at -20C

#13084

Wee1 (D10D2) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, W-S, IP, IHC-P, FC-FP	H M R Mk	Endogenous	95	Rabbit IgG	#P30291	7465

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:100 - 1:400
Flow Cytometry (Fixed/Permeabilized)	1:100 - 1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #53692.

Specificity/Sensitivity

Wee1 (D10D2) Rabbit mAb recognizes endogenous levels of total Wee1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala54 of human Wee1 protein.

Background

Entry of all eukaryotic cells into mitosis is regulated by activation of cdc2 kinase. The critical regulatory step in activating cdc2 during progression into mitosis appears to be dephosphorylation of Tyr15 and Thr14 (1,2). Phosphorylation at Tyr15 and Thr14 and inhibition of cdc2 is carried out by Wee1 and Myt1 protein kinases, while Tyr15 dephosphorylation and activation of cdc2 is carried out by the cdc25 phosphatase (1,3,4). Hyperphosphorylation and inactivation of Myt1 in mitosis suggests that one or more kinases activated at the G2/M transition negatively regulates Myt1 activity. Kinases shown to phosphorylate Myt1 include cdc2, p90RSK, Akt, and Plk1 (5-7).

Wee1 is inactivated upon mitotic entry by phosphorylation at Ser53 and Ser123 by Plk1 and cdc2, followed by β-TrCP-mediated ubiquitination and degradation (1,9,10).

Background References

1. Watanabe, N. et al. (1995) *EMBO J* 14, 1878-91.
2. Hunter, T. (1995) *Cell* 80, 225-36.
3. Galaktionov, K. et al. (1995) *Genes Dev* 9, 1046-58.
4. McGowan, C.H. and Russell, P. (1993) *EMBO J* 12, 75-85.
5. Booher, R.N. et al. (1997) *J Biol Chem* 272, 22300-6.
6. Palmer, A. et al. (1998) *EMBO J* 17, 5037-47.
7. Nakajima, H. et al. (2003) *J Biol Chem* 278, 25277-80.
8. Parker, L.L. et al. (1995) *Proc Natl Acad Sci U S A* 92, 9638-42.
9. Watanabe, N. et al. (2004) *Proc Natl Acad Sci U S A* 101, 4419-24.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.