

**Phospho-Wee1(S53) Antibody**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3285a**

**Specification**

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**Phospho-Wee1(S53) Antibody - Product Information**

Application	WB, IHC-P, DB,E
Primary Accession	<a href="#">P30291</a>
Other Accession	<a href="#">O63802</a> , <a href="#">P47810</a>
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

**Phospho-Wee1(S53) Antibody - Additional Information**

**Gene ID** 7465

**Other Names**

Wee1-like protein kinase, WEE1hu, Wee1A kinase, WEE1

**Target/Specificity**

This Wee1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S53 of human Wee1.

**Dilution**

WB~~1:1000  
IHC-P~~1:10~50  
DB~~1:500

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-Wee1(S53) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Phospho-Wee1(S53) Antibody - Protein Information**

**Name** WEE1 {ECO:0000303|PubMed:8348613, ECO:0000312|HGNC:HGNC:12761}

**Function** Acts as a negative regulator of entry into mitosis (G2 to M transition) by protecting the

nucleus from cytoplasmically activated cyclin B1-complexed CDK1 before the onset of mitosis by mediating phosphorylation of CDK1 on 'Tyr-15' (PubMed:[15070733](#), PubMed:[7743995](#), PubMed:[8348613](#), PubMed:[8428596](#)). Specifically phosphorylates and inactivates cyclin B1-complexed CDK1 reaching a maximum during G2 phase and a minimum as cells enter M phase (PubMed:[7743995](#), PubMed:[8348613](#), PubMed:[8428596](#)). Phosphorylation of cyclin B1-CDK1 occurs exclusively on 'Tyr-15' and phosphorylation of monomeric CDK1 does not occur (PubMed:[7743995](#), PubMed:[8348613](#), PubMed:[8428596](#)). Its activity increases during S and G2 phases and decreases at M phase when it is hyperphosphorylated (PubMed:[7743995](#)). A correlated decrease in protein level occurs at M/G1 phase, probably due to its degradation (PubMed:[7743995](#)).

#### Cellular Location

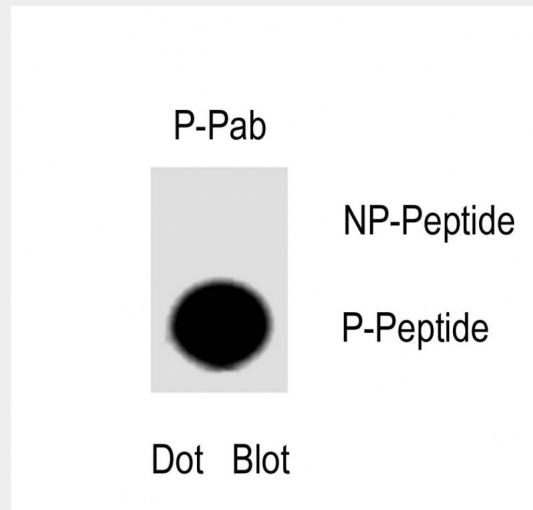
Nucleus.

#### Phospho-Wee1(S53) Antibody - Protocols

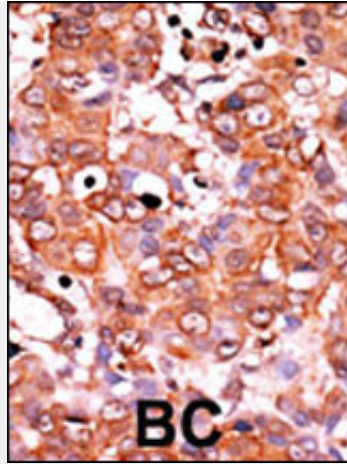
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

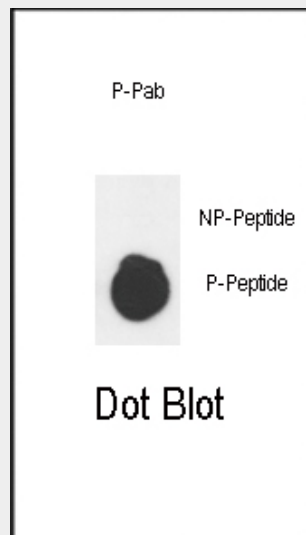
#### Phospho-Wee1(S53) Antibody - Images



Dot blot analysis of Phospho Wee-S53 Antibody (Cat. AP3285a) on nitrocellulose membrane. 50ng of Phospho-peptide per dot were adsorbed. Antibodies working concentration was 0.5 µg per ml



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma



Dot blot analysis of anti-Phospho-Wee1-S53 Antibody (Cat. #AP3285a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibodies working concentration was 0.5ug per ml.

### Phospho-Wee1(S53) Antibody - Background

This gene encodes a nuclear protein, which is a tyrosine kinase belonging to the Ser/Thr family of protein kinases. This protein catalyzes the inhibitory tyrosine phosphorylation of CDC2/cyclin B kinase, and appears to coordinate the transition between DNA replication and mitosis by protecting the nucleus from cytoplasmically activated CDC2 kinase.

### Phospho-Wee1(S53) Antibody - References

- Dai, X., et al., J. Invest. Dermatol. 122(6):1356-1364 (2004).
- Watanabe, N., et al., Proc. Natl. Acad. Sci. U.S.A. 101(13):4419-4424 (2004).
- Yoshida, T., et al., Ann. Oncol. 15(2):252-256 (2004).
- Kawasaki, H., et al., Oncogene 22(44):6839-6844 (2003).
- Yuan, H., et al., J. Virol. 77(3):2063-2070 (2003).