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Phospho-Wee1(S53) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3285a

Product Information

Application	WB, DB, IHC-P, E
Primary Accession	P30291
Other Accession	Q63802, P47810
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	71597

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 DB~~1:500 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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.

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.

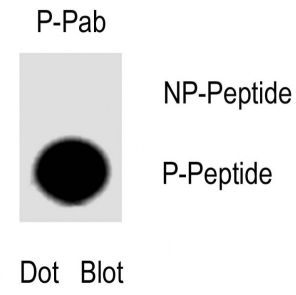
Background

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.

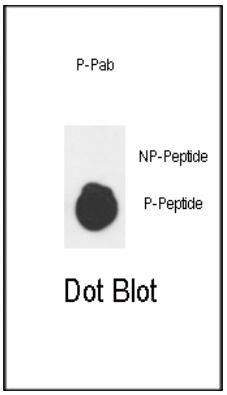
References

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).

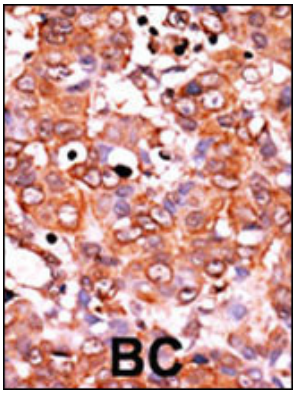
Images



Dot blot analysis of Phospho Wee-S53 Antibody (Cat. AP3285a) on nitrocellulose membrane. 50ng of Phospho-peptide per dot were adsorbed. Antobodies working concentration was 0. 5ug per ml



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. Antobodies working concentration was 0.5ug 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