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WEE1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8106c

Product Information

Application	WB, IHC-P, E
Primary Accession	P30291
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	71597
Antigen Region	144-173

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 peptide between 144-173 amino acids from the Central region of human WEE1.
Dilution	WB~~1:1000 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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	WEE1 Antibody (Center) 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.

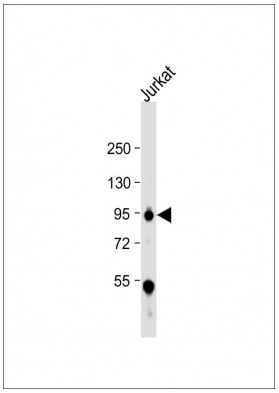
Background

WEE1 is 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.

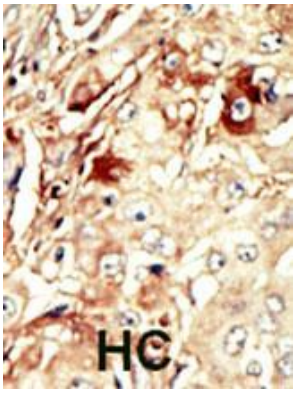
References

Kawasaki, H., et al., Oncogene 22(44):6839-6844 (2003).
Hashimoto, O., et al., Mol. Carcinog. 36(4):171-182 (2003).
Yuan, H., et al., J. Virol. 77(3):2063-2070 (2003).
Masaki, T., et al., Hepatology 37(3):534-543 (2003).
de Noronha, C.M., et al., Science 294(5544):1105-1108 (2001).

Images



Anti-WEE1 Antibody (A159) at 1:1000 dilution + Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 72 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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