

Product name:	Wee 1 (phospho Ser53) Rabbit Polyclonal Antibody
Cat number:	ABN05630
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human WEE1 around the phosphorylation site of Ser53. AA range:19-68
Reactivity:	Human,Mouse,Rat
Applications:	IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:10000-1:20000
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

WEE1 G2 checkpoint kinase(WEE1) Homo sapiens 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. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate.,cofactor:Binds 2 magnesium ions per subunit.,enzyme regulation:Synthesis is increased during S and G2 phases, presumably by an increase in transcription; activity is decreased by phosphorylation during m phase. Protein levels fall in M phase as a result of decreased synthesis combined with degradation. Activity seems to be negatively regulated by phosphorylation upon entry into mitosis, although N-terminal phosphorylation might also regulate the protein stability via protection from proteolysis or might regulate the subcellular location.,function:May act as a negative regulator of entry into mitosis (G2 to M transition) by protecting the nucleus from cytoplasmically activated cyclin B1-complexed CDC2 before the onset of mitosis. Its activity increases during S and G2 phases and decreases at M phase when it is hyperphosphorylated. A correlated decrease in protein level occurs at M/G1 phase, probably due to its degradation. Specifically phosphorylates and inactivates cyclin B1-complexed CDC2 reaching a maximum during G2 phase and a minimum as cells enter M phase. Phosphorylation of cyclin B1-CDC2 occurs exclusively on 'Tyr-15' and phosphorylation of monomeric CDC2 does not occur.,PTM:Phosphorylated during M and G1 phases. Also autophosphorylated.,PTM:Ubiquitinated and degraded at the onset of G2/M phase.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. WEE1 subfamily.,similarity:Contains 1 protein kinase domain.,