

## Product datasheet for **AP02422PU-S**

### CDK1 pThr161 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	Suitable for use in Western blot (1:500~1:1000) and Immunohistochemistry (1:50~1:100).
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	The antiserum was produced against synthesized phosphopeptide derived from human CDC2 around the phosphorylation site of threonine161 (T-Y-TP-H-E).
Specificity:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site. CDC2 (phospho-Thr161) antibody detects endogenous levels of CDC2 only when phosphorylated at threonine 161.
Formulation:	PBS (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150 mM NaCl, 0.02% Sodium Azide and 50% Glycerol. State: Aff - Purified State: Liquid purified Ig fraction.
Concentration:	lot specific
Purification:	Immunoaffinity chromatography.
Conjugation:	Unconjugated
Storage:	Store the antibody (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: One year from despatch.
Gene Name:	cyclin-dependent kinase 1
Database Link:	<a href="#">Entrez Gene 983 Human P06493</a>



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**Background:**

The cell division control protein *cdc2*, also known as cyclin dependent kinase 1 (Cdk1) or p34/cdk1, plays a key role in the control of the eukaryotic cell cycle, where it is required for entry into S phase and mitosis. Cdc2 exists as a complex with both cyclin A and cyclin B. The best characterized of these associations is the Cdc2 p34 cyclin B complex, which is required for the G2 to M phase transition. Activation of Cdc2 is controlled at several steps including cyclin binding and phosphorylation of threonine 161. However, the critical regulatory step in activating *cdc2* during progression into mitosis appears to be dephosphorylation of Tyr15 and Tyr14. Phosphorylation at Tyr15 and inhibition of Cdc2 is carried out by WEE1 and MIK protein kinases while Tyr15 dephosphorylation and activation of Cdc2 is carried out by the *cdc25* phosphatase. The isoform CDC2deltaT is found in breast cancer tissues. Furthermore, *cdc2/Cdk1* is a key mediator of neuronal cell death in brain development and degeneration.

**Synonyms:**

CDK1, CDC2, CDC28A, CDKN1, P34CDC2, p34 protein kinase

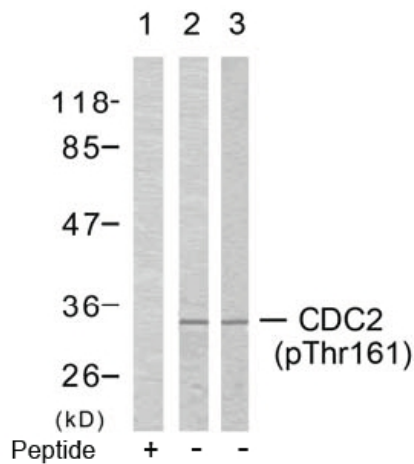
**Product images:**


Figure 2. Western blot analysis of extracts from COLO205 cells (Lane 1 and 2) and K562 cells (Lane 3), using CDC2 (phospho-Thr161) antibody.

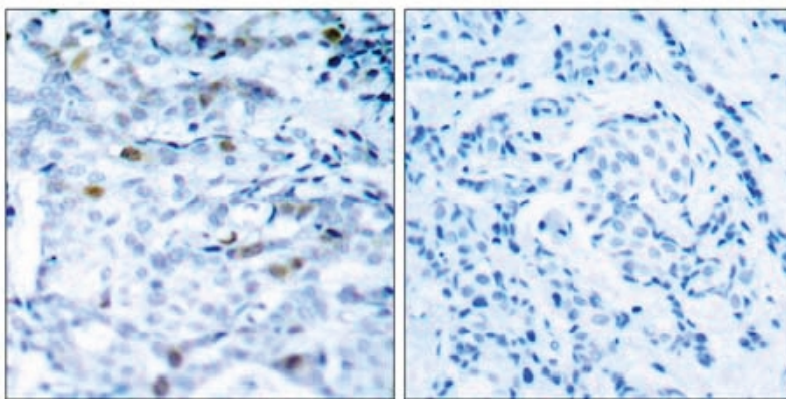


Figure 1. Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue, using CDC2 (phospho-Thr161) antibody.