

Product datasheet for **AP20350PU-S**

CDK1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	Western blot: 1/500-1/1000.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of Cdk1/Cdc2 protein.
Formulation:	Phosphate buffered saline (PBS) with 0.05% sodium azide, approx. pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction
Concentration:	1.0 mg/ml
Purification:	Affinity-chromatography using epitope-specific immunogen; purity is > 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 34 kDa
Gene Name:	cyclin-dependent kinase 1
Database Link:	Entrez Gene 12534 Mouse Entrez Gene 54237 Rat Entrez Gene 983 Human P06493



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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:

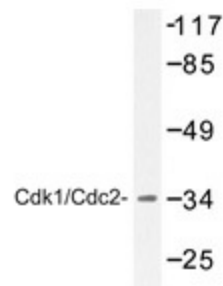
CDK1, CDC2, CDC28A, CDKN1, P34CDC2, p34 protein kinase

Protein Families:

Druggable Genome, Protein Kinase, Stem cell - Pluripotency

Protein Pathways:

Cell cycle, Gap junction, Oocyte meiosis, p53 signaling pathway, Progesterone-mediated oocyte maturation

Product images:

Western blot analysis of Cdk1/Cdc2 antibody (Cat.-No.: [AP20350PU-N]) in extracts from HepG2 cells.