

Product datasheet for **AM06437SU-N**

CDK1 Mouse Monoclonal Antibody [Clone ID: 8C5A6]

Product data:

Product Type:	Primary Antibodies
Clone Name:	8C5A6
Applications:	ELISA, IHC, WB
Recommended Dilution:	Western Blot: 1/500 - 1/2000. Immunohistochemistry on paraffin sections: 1/200 - 1/1000. ELISA: 1/10000.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Purified recombinant fragment of CDC2 expressed in E. Coli.
Specificity:	This antibody reacts to CDC2.
Formulation:	State: Ascites State: Ascitic fluid containing 0.03% sodium azide.
Conjugation:	Unconjugated
Storage:	Store the antibody 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 983 Human P06493



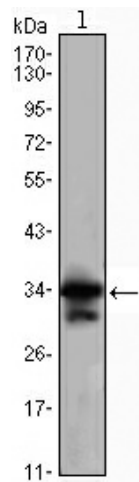
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Background:

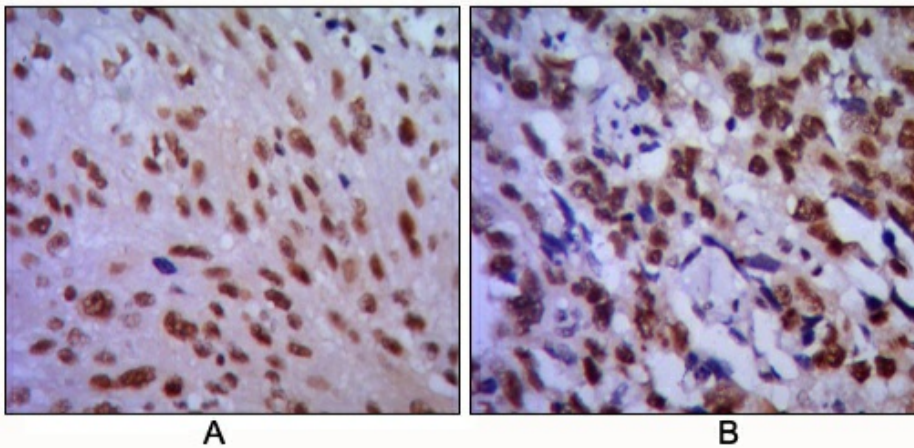
The cell division control protein *cdc2*, also known as cyclin-dependent kinase 1 (Cdk1) or p34/cdk1, plays a key role in the control of the eukaryotic cell cycle, where it is required for entry into S-phase and mitosis. Cdc2 exists as a complex with both cyclin A and cyclin B. The best characterized 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

Product images:

Western blot analysis using CDC2 mouse mAb against Jurkat (1) cell lysate.



Immunohistochemical analysis of paraffin-embedded human lung cancer (A) and esophageal cancer (B), showing cytoplasmic localization using CDC2 mouse mAb with DAB staining.