



CDC2

Mouse monoclonal Antibody

#54045

Catalog Number: 54045**Amount:** 100µg/100µl**Swiss-Prot No. :** P06493**Form of Antibody:** Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50% glycerol**Storage/Stability:** Store at -20°C/1 year**Immunogen:** Purified recombinant human CDC2 protein fragments expressed in E.coli**Purification:** affinity-chromatography**Specificity/Sensitivity:** This antibody detects endogenous levels of CDC2 and does not cross-react with related proteins**Reactivity:** Human**Applications:**

Predicted MW: 34kd WB:1:500-2000 ICC:1:200-1000

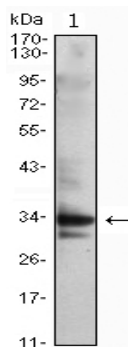


Figure 1: Western blot analysis using CDC2 mouse mAb against Jurkat (1) cell lysate.

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.