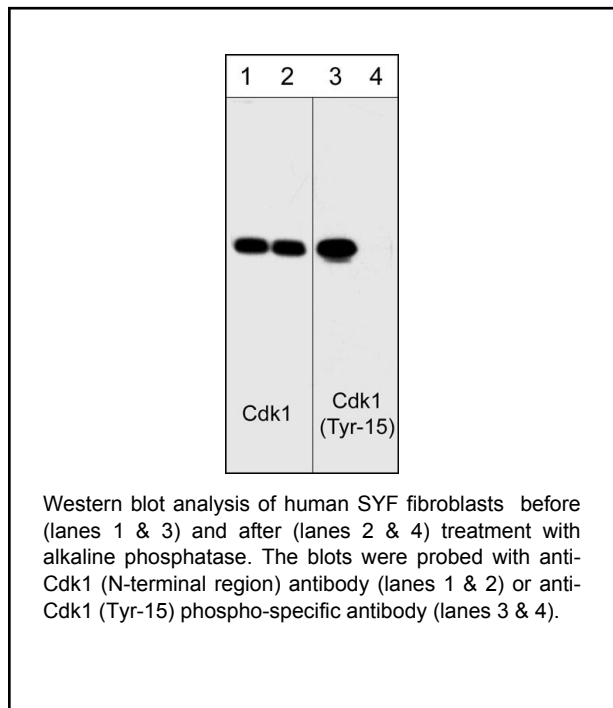


### Background

Cyclin-dependent kinases (Cdks) are a family of serine/threonine kinases that require association with regulatory subunits known as cyclins for activation. In addition, post-translational phosphorylation and dephosphorylation events regulate Cdk activity. Phosphorylation of Thr-160 in the T loop by Cdk-activating kinase (CAK) is an obligatory step in kinase activation. By contrast, phosphorylation of the Thr-14 and Tyr-15 residues by the Wee1 family of dual specificity kinases is inhibitory for the Cdks, and dephosphorylation of these residues by the Cdc25 family of phosphatases coincides with Cdk activation. Alternatively, Cdk5 appears to require different mechanisms for activation. This Cdk is activated through association with specific activators, including p35, p39, and p67. Cdk5 is primarily activated in neuronal cells, and only c-Abl kinase, rather than Wee family members, have been shown to phosphorylate Tyr-15 to regulate its activity.

### Background References

Poon, R.Y.C. et al. (1997) *J Biol. Chem.* 272( 9):5703.  
 Zukerberg, L. R. (2000) *Neuron* 26:633.  
 Lee, J.H. et al. (2008) *J Biol. Chem.* May 19 epub.



### Applications

WB 1:1000  
 ELISA 1:2000  
 ICC 1:100

### Species Reactivity

Hu, Rt, Ms

### Specificity

The antibody detects a 34 kDa\* band corresponding to Cdk1 on SDS-PAGE immunoblots of human SYF and HeLa cells. The antibody does not detect other Cdk family members, such as Cdk2 and Cdk5.

End user should determine optimal dilution for their particular applications and experiments.  
 Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

\*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

### Immunogen

**Uniprot ID: P06493**

Clone M226 was generated from a recombinant human Cdk1 protein that included amino acids residues in the N-terminal region. This sequence is conserved in human and rat Cdk1, and has low homology to other Cdk family members.

### Buffer and Storage

Mouse monoclonal antibody purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

### Related Products

CM2311 Cdk1 (Tyr-15)[conserved site], phospho-specific Mouse Monoclonal  
 CM2361 Cdk5 Mouse Monoclonal  
 CK7700 Cell Structure Labeling Immunocytochemistry Kit  
 MK6050 MAP Kinase Activation Antibody Sampler Kit  
 PK6330 Phospho-Tyrosine, Serine, Threonine Antibody Sampler Kit

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