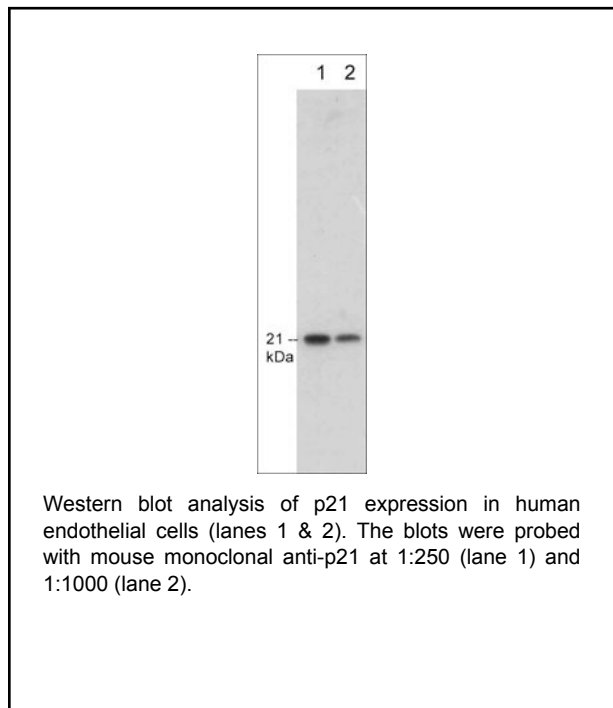


### Background

The tumor suppressor protein p21/CIP1/WAF1 acts as an inhibitor of cell cycle progression. It functions in stoichiometric relationships forming heterotrimeric complexes with cyclins and cyclin-dependent kinases. In association with CDK2 complexes, it serves to inhibit kinase activity and block progression through G1/S. However, p21 may also enhance assembly and activity in complexes of CDK4 or CDK6 and cyclin D. The carboxy-terminal region of p21 is sufficient to bind and inhibit PCNA, a subunit of DNA polymerase, and may coordinate DNA replication with cell cycle progression. Upon UV damage or during cell cycle stages when cdc2/cyclin B or CDK2/cyclin A are active, p53 is phosphorylated and upregulates p21 transcription via a p53-responsive element. Protein levels of p21 are downregulated through ubiquitination and proteasomal degradation.



### Background References

- Flores-Rozas, H. et al. (1994) PNAS, USA. 91:8655.  
 Cheng, J. et al. (1999) EMBO J. 18:1571.  
 Sheaff, R.J. et al. (2000) Cell 5:403.

### Applications

WB	1:500
ICC	1:50
IP	1:50
IHC	1:50

### Species Reactivity

Hu  
**Isotype:** IgG2a

### Specificity

The antibody detects a 21 kDa\* protein corresponding to the apparent molecular mass of p21 on SDS-PAGE immunoblots of human endothelial cells (HUVEC), HeLa cells, and Fibroblasts. The antibody is also useful for immunoprecipitation and immunofluorescent labeling in human cells.

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: P38936**

Clone M513 was generated from a full length recombinant human p21 protein. The antibody detects human p21.

### 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

- AK6060 Actin & Tubulin Antibody Sampler Kit
- CM2261 Cdk1 (N-terminal region) Mouse Monoclonal
- CM2311 Cdk1 (Tyr-15)[conserved site], phospho-specific Mouse Monoclonal
- CM2361 Cdk5 Mouse Monoclonal
- MK6050 MAP Kinase Activation Antibody Sampler Kit

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