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#2978

## Cyclin D1 (92G2) Rabbit mAb

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IHC-P	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 36	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P24385	<b>Entrez-Gene Id:</b> 595
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### Product Usage Information

#### Application

Western Blotting  
Immunohistochemistry (Paraffin)

#### Dilution

1:1000  
1:50

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

Cyclin D1 (92G2) Rabbit mAb detects endogenous levels of total cyclin D1 protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminus of human cyclin D1.

### Background

Activity of the cyclin-dependent kinases CDK4 and CDK6 is regulated by T-loop phosphorylation, by the abundance of their cyclin partners (the D-type cyclins), and by association with CDK inhibitors of the Cip/Kip or INK family of proteins (1). The inactive ternary complex of cyclin D/CDK4 and p27 Kip1 requires extracellular mitogenic stimuli for the release and degradation of p27 concomitant with a rise in cyclin D levels to affect progression through the restriction point and Rb-dependent entry into S-phase (2). The active complex of cyclin D/CDK4 targets the retinoblastoma protein for phosphorylation, allowing the release of E2F transcription factors that activate G1/S-phase gene expression (3). Levels of cyclin D protein drop upon withdrawal of growth factors through downregulation of protein expression and phosphorylation-dependent degradation (4).

### Background References

- Hirai, H. et al. (1995) *Mol Cell Biol* 15, 2672-81.
- Sherr, C.J. (1996) *Science* 274, 1672-7.
- Lukas, J. et al. (1996) *Mol Cell Biol* 16, 6917-25.
- Diehl, J.A. et al. (1997) *Genes Dev* 11, 957-72.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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