

#2978 Store at -20°C

Cyclin D1 (92G2) Rabbit mAb



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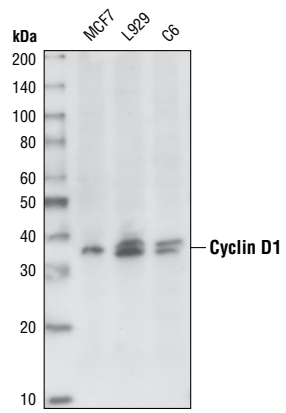
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IHC-P Endogenous	H, M, R	36 kDa	Rabbit IgG**

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 effect progression through the restriction point and pRb-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 its protein expression and through phosphorylation-dependent degradation (4).

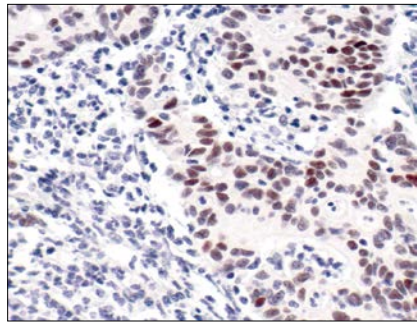
Specificity/Sensitivity: Cyclin D1 (92G2) Rabbit mAb detects endogenous levels of total cyclin D1 protein.

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

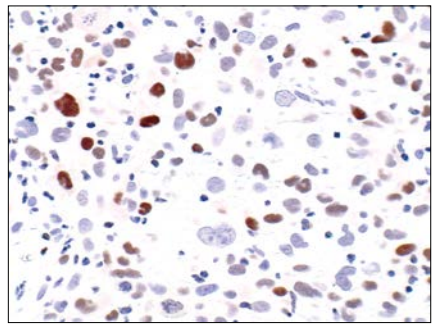
- Background References:**
- (1) Hirai, H. et al. (1995) *Mol. Cell. Biol.* 15, 2672–2681.
 - (2) Sherr, C.J. (1996) *Science* 274, 1672–1677.
 - (3) Lukas, J. et al. (1996) *Mol. Cell. Biol.* 16, 6917–6925.
 - (4) Diehl, J.A. et al. (1997) *Genes Dev.* 11, 957–972.



Western blot analysis of extracts from MCF7, L929 and C6 cells, using Cyclin D1 (92G2) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using Cyclin D1 (92G2) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded H1975 xenograft, using Cyclin D1 (92G2) Rabbit mAb.

Entrez-Gene ID #595
UniProt Acc. #P24385

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:50
<i>Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.</i>	
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

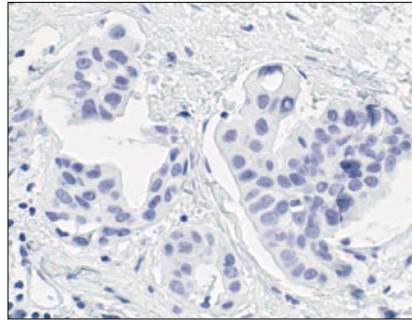
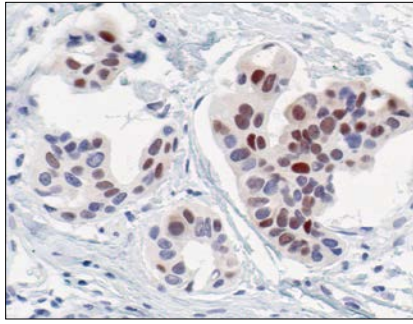
U.S. Patent No. 5,675,063

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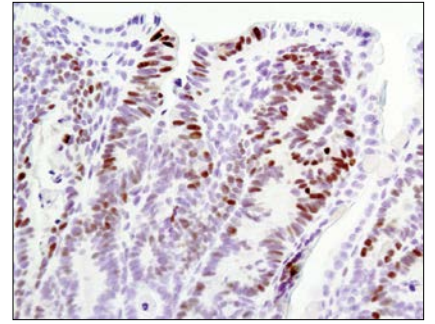
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using Cyclin D1 (92G2) Rabbit mAb in the presence of control peptide (left) or Cyclin D1 Blocking Peptide #1044 (right).



Immunohistochemical analysis of paraffin-embedded Apc (min/+) mouse intestine using Cyclin D1 (92G2) Rabbit mAb.