

**Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody**  
**Mouse Monoclonal Antibody [Clone SPM587 ]**  
**Catalog # AH12236**

**Specification**

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**Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - Product Information**

Application	,4,
Primary Accession	<a href="#">P24385</a>
Other Accession	<a href="#">595</a> , <a href="#">523852</a> , <a href="#">667996</a>
Reactivity	Human, Mouse, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2a, kappa
Calculated MW	36kDa kDa

**Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - Additional Information**

**Gene ID** 595

**Other Names**

G1/S-specific cyclin-D1, B-cell lymphoma 1 protein, BCL-1, BCL-1 oncogene, PRAD1 oncogene, CCND1, BCL1, PRAD1

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - Protein Information**

**Name** CCND1 {ECO:0000303|PubMed:8204893, ECO:0000312|HGNC:HGNC:1582}

**Function**

Regulatory component of the cyclin D1-CDK4 (DC) complex that phosphorylates and inhibits members of the retinoblastoma (RB) protein family including RB1 and regulates the cell-cycle during G(1)/S transition (PubMed: [1827756](http://www.uniprot.org/citations/1827756), PubMed: [1833066](http://www.uniprot.org/citations/1833066), PubMed: [19412162](http://www.uniprot.org/citations/19412162), PubMed: [33854235](http://www.uniprot.org/citations/33854235), PubMed: [8114739](http://www.uniprot.org/citations/8114739), PubMed: [8302605](http://www.uniprot.org/citations/8302605)). Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complex and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase (PubMed: [1827756](http://www.uniprot.org/citations/1827756), PubMed: [1833066](http://www.uniprot.org/citations/1833066), PubMed: [19412162](http://www.uniprot.org/citations/19412162), PubMed: [33854235](http://www.uniprot.org/citations/33854235), PubMed: [8114739](http://www.uniprot.org/citations/8114739), PubMed: [8302605](http://www.uniprot.org/citations/8302605)).

href="http://www.uniprot.org/citations/19412162" target="\_blank">19412162</a>, PubMed:<a href="http://www.uniprot.org/citations/8114739" target="\_blank">8114739</a>, PubMed:<a href="http://www.uniprot.org/citations/8302605" target="\_blank">8302605</a>). Hypophosphorylates RB1 in early G(1) phase (PubMed:<a href="http://www.uniprot.org/citations/1827756" target="\_blank">1827756</a>, PubMed:<a href="http://www.uniprot.org/citations/1833066" target="\_blank">1833066</a>, PubMed:<a href="http://www.uniprot.org/citations/19412162" target="\_blank">19412162</a>, PubMed:<a href="http://www.uniprot.org/citations/8114739" target="\_blank">8114739</a>, PubMed:<a href="http://www.uniprot.org/citations/8302605" target="\_blank">8302605</a>). Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals (PubMed:<a href="http://www.uniprot.org/citations/1827756" target="\_blank">1827756</a>, PubMed:<a href="http://www.uniprot.org/citations/1833066" target="\_blank">1833066</a>, PubMed:<a href="http://www.uniprot.org/citations/19412162" target="\_blank">19412162</a>, PubMed:<a href="http://www.uniprot.org/citations/8302605" target="\_blank">8302605</a>). Also a substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity (PubMed:<a href="http://www.uniprot.org/citations/15241418" target="\_blank">15241418</a>). Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (PubMed:<a href="http://www.uniprot.org/citations/9106657" target="\_blank">9106657</a>). Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner (PubMed:<a href="http://www.uniprot.org/citations/16569215" target="\_blank">16569215</a>, PubMed:<a href="http://www.uniprot.org/citations/18417529" target="\_blank">18417529</a>).

#### Cellular Location

Nucleus. Cytoplasm Nucleus membrane. Note=Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated to the nucleus through interaction with KIP/CIP family members

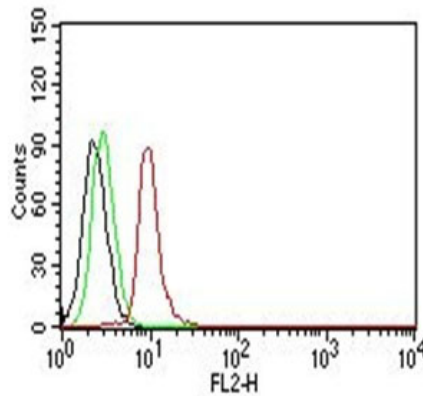
#### Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

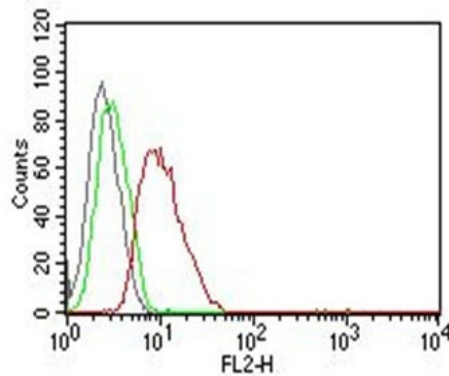
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - Images





Flow Cytometry of human Cyclin D1 on Jurkat Cells. Black: Cells alone; Green: Isotype Control; Red: PE-labeled Cyclin D1 Monoclonal Antibody (SPM587).



Flow Cytometry of human Cyclin D1 on MCF-7 Cells. Black: Cells alone; Green: Isotype Control; Red: PE-labeled Cyclin D1 Monoclonal Antibody (SPM587).

### **Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - Background**

Recognizes a protein of 36kDa, identified as cyclin D1. Cyclin D1, one of the key cell cycle regulators, is a putative proto-oncogene overexpressed in a wide variety of human neoplasms. This antibody neutralizes the activity of cyclin D1 in vivo. About 60% of mantle cell lymphomas (MCL) contain a t(11; 14)(q13; q32) translocation resulting in over-expression of cyclin D1. This antibody is useful in identifying mantle cell lymphomas (cyclin D1 positive) from CLL/SLL and follicular lymphomas (cyclin D1 negative). Occasionally, hairy cell leukemia and plasma cell myeloma weakly express Cyclin D1.

### **Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - References**

Lukas J, et. al. *Oncogene*, 1994, 9(3):707-18. | Gillett C, et. al. *Cancer Research*, 1994, 54(7):1812-7. | Bartkova J, et. al. *Journal of Pathology*, 1994, 172(3):237-45