

**Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - With BSA and Azide**  
**Mouse Monoclonal Antibody [Clone CCND1/809 ]**  
**Catalog # AH12238**

**Specification**

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**Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - With BSA and Azide - Product Information**

Application	,1,2,3,4,
Primary Accession	<a href="#">P24385</a>
Other Accession	<a href="#">595</a> , <a href="#">523852</a> , <a href="#">667996</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2a, kappa
Calculated MW	36kDa KDa

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

**Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - With BSA and Azide - 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: <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/33854235" target="\_blank">33854235</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>). 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:<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>).

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

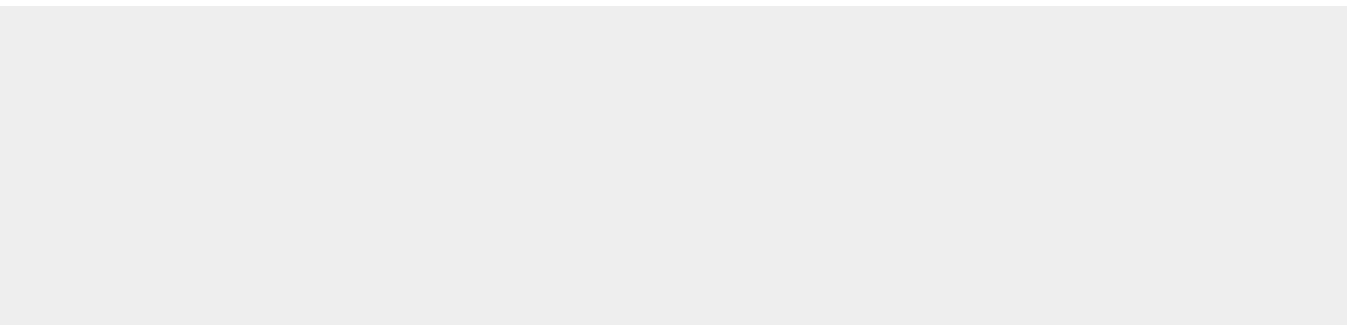
Nucleus. Cytoplasm Nucleus membrane. Note=Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated to the nucleus through interaction with KIP/CIP family members

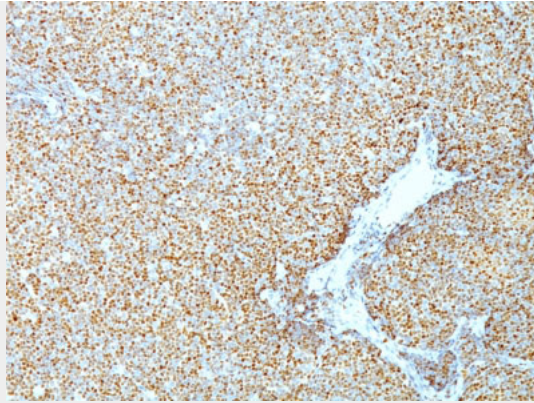
#### Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - With BSA and Azide - Protocols

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

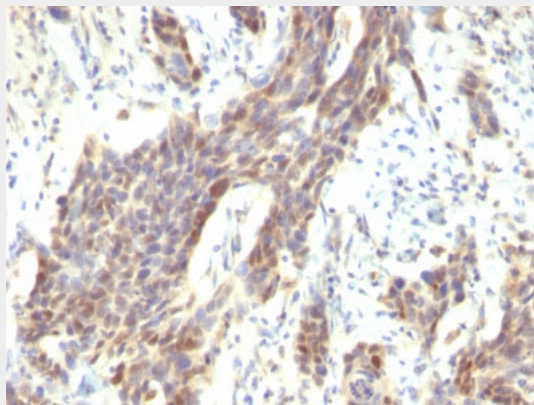
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - With BSA and Azide - Images

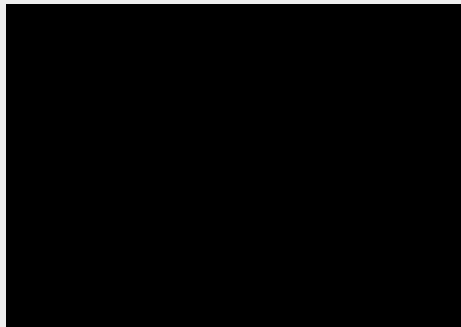




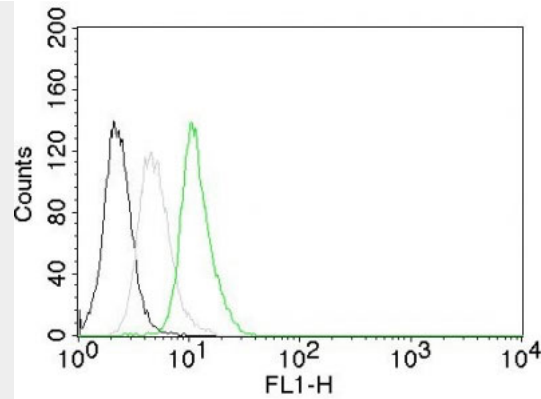
Formalin-fixed, paraffin-embedded human Mantle Cell Lymphoma stained with Cyclin D1 Monoclonal Antibody (CCND1/809).



Formalin-fixed, paraffin-embedded human Bladder Carcinoma stained with Cyclin D1 Monoclonal Antibody (CCND1/809).



Flow Cytometry of human Cyclin D1 on HeLa Cells. Black: Cells alone; Green: Isotype Control; Red: PE-labeled Cyclin D1 Monoclonal Antibody (CCND1/809).



Flow Cytometry of human Cyclin D1 on Jurkat Cells. Black: Cells alone; Grey: Isotype Control; Green: AF488-labeled Cyclin D1 Monoclonal Antibody (CCND1/809).

#### **Cyclin D1 (G1-Cyclin & Mantle Cell Marker) Antibody - With BSA and Azide - 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 - With BSA and Azide - References**

Baldin V; Lukas J; Marcote MJ; Pagano M; Draetta G. Cyclin D1 is a nuclear protein required for cell cycle progression in G1. *Genes and Development*, 1993, 7(5):812-21