10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-Cyclin D1, Rabbit Monoclonal Antibody

Rabbit Monoclonal Antibody
Catalog # ABV11823

## Product Information

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|---|---|
| **Application** | WB, IHC |
| **Primary Accession** | P24385 |
| **Reactivity** | Human |
| **Host** | Rabbit |
| **Clonality** | Monoclonal |
| **Isotype** | Rabbit IgG |
| **Calculated MW** | 33729 |

## Additional Information

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|---|---|
| **Gene ID** | 595 |
| **Positive Control** | WB: Hela cell lysate; IHC: human breast cancer tissue |
| **Application & Usage** | IHC: 1:500 -1:1000 dilution; WB: 1:1000 - 1:2000 dilution. |
| **Alias Symbol** | CCND1 |
| **Other Names** | G1/S-specific cyclin-D1, B-cell lymphoma 1 protein, BCL-1, PRAD1 |
| **Appearance** | Colorless liquid |
| **Formulation** | In 50% Glycerol/PBS with 1% BSA and 0.09% sodium azide |
| **Reconstitution & Storage** | -20 °C |
| **Background Descriptions** | |
| **Precautions** | Anti-Cyclin D1, Rabbit Monoclonal Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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|---|---|
| **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, PubMed:1833066, PubMed:19412162, PubMed:33854235, PubMed:8114739, PubMed: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, PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Hypophosphorylates RB1 in early G(1) phase (PubMed:1827756, |

PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8302605). Also a substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity (PubMed:15241418). Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (PubMed:9106657). Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner (PubMed:16569215, PubMed:18417529).

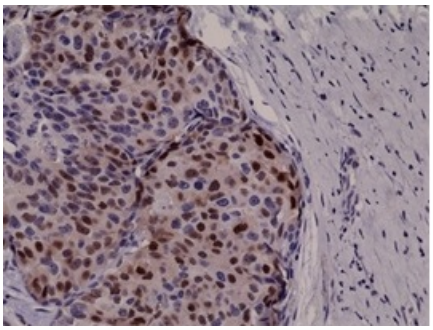
**Cellular Location**

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

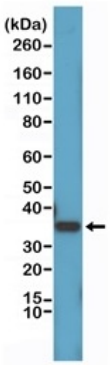
## Background

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 G1/S transition. 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 G1 phase. Hypophosphorylates RB1 in early G1 phase. Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals. Also substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity. Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex. Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner.

## Images



Immunohistochemical staining of formalin fixed and paraffin embedded human breast cancer tissue sections using anti-Cyclin D1 monoclonal antibody at 1:1000 dilution.




Western blot of Hela cell lysates using anti-Cyclin D1 monoclonal antibody at 1:1000 dilution, showed a band of Cyclin D1 (~34kDa) expressed in Hela cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.