

# CyclinD1 recombinant protein

CatalogNo: YD3041

## **| Key Features**

Reactivity

Human

#### Recommended Dilution Ratios

#### Storage

**Storage\*** -15°C to -25°C/1 year(Avoid freeze / thaw cycles)

**Formulation** Phosphate-buffered solution

#### **Basic Information**

| Source       | Mammalian cells                |
|--------------|--------------------------------|
| Purification | Mammalian cells                |
| Purity       | >90% as determined by SDS-PAGE |

# Immunogen Information

### | Target Information

Gene name CCND1

Protein Name G1/S-specific cyclin-D1 (B-cell lymphoma 1 protein) (BCL-1) (BCL-1 oncogene) (PRAD1

oncogene)

| Organism | Gene ID      | UniProt ID      |
|----------|--------------|-----------------|
| Human    | <u>595</u> ; | <u>P24385</u> ; |

#### Cellular Localization

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. .

#### **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 cellcycle 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).

#### **Validation Data**

### | Contact information

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CyclinD1 recombinant protein

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