

### Cyclin D2 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52709

### **Specification**

### **Cyclin D2 Antibody - Product Information**

Application WB
Primary Accession P30279
Reactivity Human
Host Mouse
Clonality Monoclonal
Isotype IgG2b
Calculated MW 38 KDa

# Cyclin D2 Antibody - Additional Information

#### Gene ID 894

#### **Other Names**

CCND 2;CCND2;CCND2\_HUMAN;CyclinD2;G1/S specific cyclin D2;G1/S-specific cyclin-D2; KIAK0002;MGC102758.

### **Dilution**

WB~~1:1000

#### **Format**

Purified mouse monoclonal in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

#### Storage

Store at -20 °C. Stable for 12 months from date of receipt

# **Cyclin D2 Antibody - Protein Information**

Name CCND2 {ECO:0000303|PubMed:1386336, ECO:0000312|HGNC:HGNC:1583}

### **Function**

Regulatory component of the cyclin D2-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/18827403" target="\_blank">18827403</a>, PubMed:<a href="http://www.uniprot.org/citations/8114739" target="\_blank">8114739</a>/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/18827403" target="\_blank">18827403</a>, PubMed:<a href="http://www.uniprot.org/citations/8114739" target="\_blank">8114739</a>).

Hypophosphorylates RB1 in early G(1) phase (PubMed:<a

href="http://www.uniprot.org/citations/18827403" target="\_blank">18827403</a>, PubMed:<a



 $href="http://www.uniprot.org/citations/8114739" target="\_blank">8114739</a>). Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals (PubMed:<a href="http://www.uniprot.org/citations/18827403" target="_blank">18827403</a>, PubMed:<a href="http://www.uniprot.org/citations/8114739" target="_blank">8114739</a>).$ 

#### **Cellular Location**

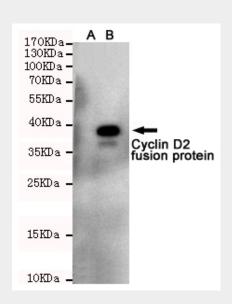
Nucleus. Cytoplasm. Nucleus membrane. Note=Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated into the nucleus through interaction with KIP/CIP family members

### Cyclin D2 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

# Cyclin D2 Antibody - Images



Western blot detection of Cyclin D2 in CHO-K1 cell lysate  $\D$ and CHO-K1 transfected by Cyclin D2-fragment EGFP fusion protein  $\D$ cell lysate using Cyclin D2 mouse mAb (1:1000 diluted). Predicted band size:38 KDa. Observed band size:38 KDa.

### Cyclin D2 Antibody - Background

Regulatory component of the cyclin D2-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. 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. Hypophosphorylates RB1 in early G(1) phase. Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic





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signals. Also substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity. Component of the ternary complex, cyclin D2/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (By similarity).

# **Cyclin D2 Antibody - References**

Xiong Y., et al. Genomics 13:575-584(1992). Palmero I., et al. Oncogene 8:1049-1054(1993). Miyajima N., et al. Submitted (MAR-1993) to the EMBL/GenBank/DDBJ databases. Kalnine N., et al. Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases. Ota T., et al. Nat. Genet. 36:40-45(2004).