

**Anti-Cdk4 Antibody**  
Catalog # ABO10750**Specification****Anti-Cdk4 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">P30285</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Polyclonal</b>
Format	<b>Lyophilized</b>

**Description**

Rabbit IgG polyclonal antibody for Cyclin-dependent kinase 4(CDK4) detection. Tested with WB in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Cdk4 Antibody - Additional Information**

**Gene ID** 12567

**Other Names**

Cyclin-dependent kinase 4, 2.7.11.22, CRK3, Cell division protein kinase 4, PSK-J3, Cdk4, Crk3

**Calculated MW**

33751 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse<br>

**Subcellular Localization**

Cytoplasm . Nucleus . Membrane . Cytoplasmic when non- complexed. Forms a cyclin D-CDK4 complex in the cytoplasm as cells progress through G(1) phase. The complex accumulates on the nuclear membrane and enters the nucleus on transition from G(1) to S phase. Also present in nucleoli and heterochromatin lumps. Colocalizes with RB1 after release into the nucleus (By similarity). .

**Protein Name**

Cyclin-dependent kinase 4

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of mouse Cdk4(283-303aa RISAFRALQHSYLHKEESDAE), different from the related rat sequence by one amino acid, and from the related human sequence by four amino acids.

### Purification

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins

### Storage

**At -20°C for one year. After r° Constitution, at 4°C for one month. It° Can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

### Sequence Similarities

Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily.

## Anti-Cdk4 Antibody - Protein Information

**Name** Cdk4

**Synonyms** Crk3

### Function

Ser/Thr-kinase component of cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complexes 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 mitogenic and antimitogenic signals. Also phosphorylates SMAD3 in a cell-cycle-dependent manner and represses its transcriptional activity. Component of the ternary complex, cyclin D/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (By similarity).

### Cellular Location

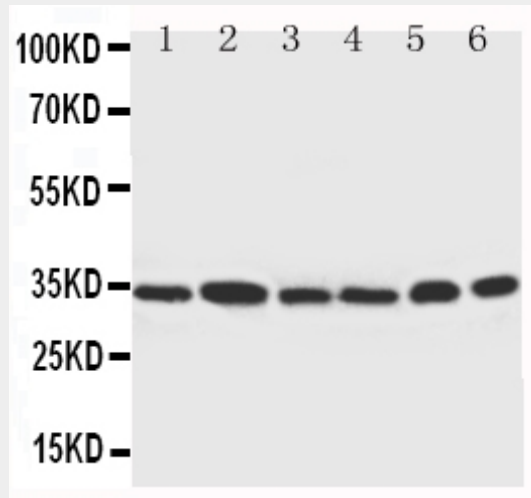
Cytoplasm {ECO:0000250|UniProtKB:P11802}. Nucleus {ECO:0000250|UniProtKB:P11802}. Nucleus membrane {ECO:0000250|UniProtKB:P11802}. Note=Cytoplasmic when non-complexed Forms a cyclin D-CDK4 complex in the cytoplasm as cells progress through G(1) phase. The complex accumulates on the nuclear membrane and enters the nucleus on transition from G(1) to S phase. Also present in nucleoli and heterochromatin lumps. Colocalizes with RB1 after release into the nucleus (By similarity). {ECO:0000250|UniProtKB:P11802}

## Anti-Cdk4 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](#)

## Anti-Cdk4 Antibody - Images



Anti-Cdk4 antibody, ABO10750, Western blotting  
Lane 1: Rat Thymus Tissue Lysate  
Lane 2: HELA Cell Lysate  
Lane 3: MCF-7 Cell Lysate  
Lane 4: A549 Cell Lysate  
Lane 5: COLO320 Cell Lysate  
Lane 6: JURKAT Cell Lysate

#### **Anti-Cdk4 Antibody - Background**

Cyclin-dependent kinase-4(CDK4) is a protein-serine kinase involved in the cell cycle. Human cell division is regulated primarily at the G1-to-S or the G2-to-M boundaries within the cell cycle. The complexes formed by CDK4 and the D-type cyclins are involved in the control of cell proliferation during the G1 phase. CDK4 is inhibited by p16, also known as cyclin-dependent kinase inhibitor-2. CDK4 is mapped to 12q14. CDK4 expression and activity are required for cytokine responsiveness in T cells.