

**Anti-Cdk4 Picoband Antibody**  
Catalog # ABO12222**Specification****Anti-Cdk4 Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P11802</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

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

**Reconstitution**

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

**Anti-Cdk4 Picoband Antibody - Additional Information**

**Gene ID** 1019

**Other Names**

Cyclin-dependent kinase 4, 2.7.11.22, Cell division protein kinase 4, PSK-J3, CDK4

**Calculated MW**

33730 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat  
Western blot, 0.1-0.5 µg/ml, Human, Rat

**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.

**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 Na<sub>3</sub>N.

**Immunogen**

E.coli-derived human Cdk4 recombinant protein (Position: G201-E303). Human Cdk4 shares 94.2% amino acid (aa) sequence identity with both mouse and rat Cdk4.

**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 Picoband Antibody - Protein Information**

**Name** CDK4

**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.

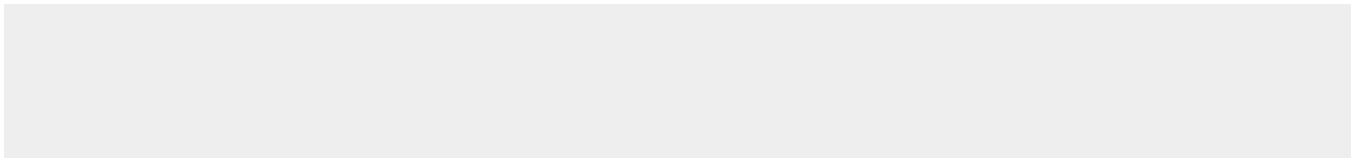
**Cellular Location**

Cytoplasm. Nucleus. Nucleus membrane. 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.

**Anti-Cdk4 Picoband Antibody - Protocols**

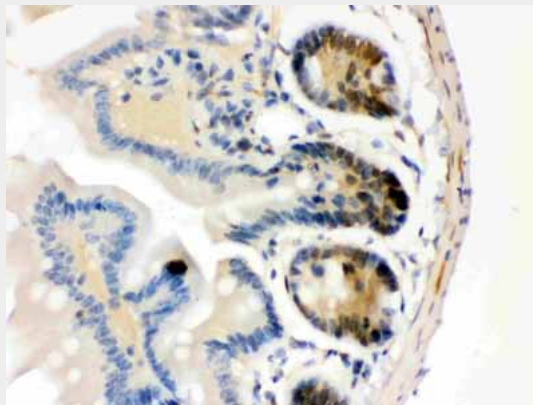
Provided below are standard protocols that you may find useful for product applications.

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

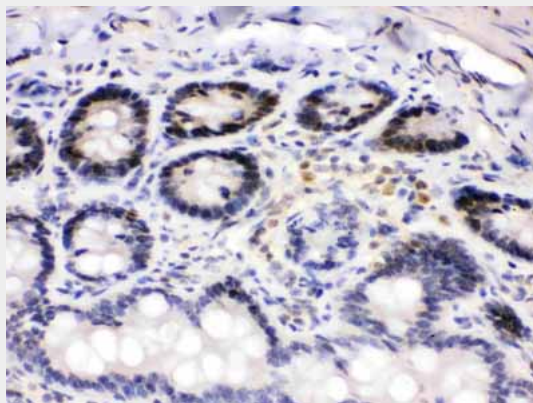
**Anti-Cdk4 Picoband Antibody - Images**



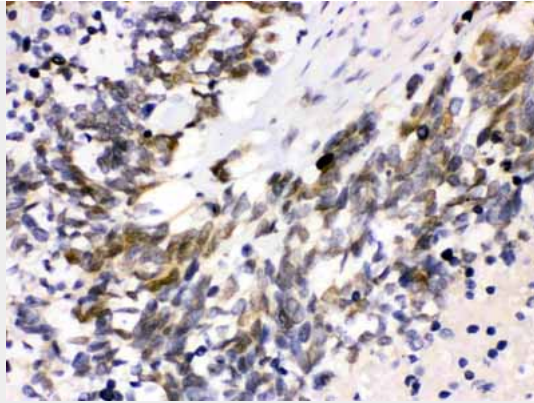
Anti- Cdk4 Picoband antibody, ABO12222, Western blotting All lanes: Anti Cdk4 (ABO12222) at 0.5ug/ml Lane 1: Rat Gaster Tissue Lysate at 50ug Lane 2: Rat Thymus Tissue Lysate at 50ug Lane 3: HELA Whole Cell Lysate at 40ug Lane 4: A549 Whole Cell Lysate at 40ug Lane 5: SKOV Whole Cell Lysate at 40ug Lane 6: 22RV1 Whole Cell Lysate at 40ug Predicted bind size: 34KD Observed bind size: 34KD



Anti- Cdk4 Picoband antibody, ABO12222, IHC(P) IHC(P): Mouse Intestine Tissue



Anti- Cdk4 Picoband antibody, ABO12222, IHC(P) IHC(P): Rat Intestine Tissue



Anti- Cdk4 Picoband antibody, ABO12222, IHC(P)IHC(P): Human Lung Cancer Tissue

#### **Anti-Cdk4 Picoband 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. And CDK4 expression and activity are required for cytokine responsiveness in T cells.