10320 Camino Santa Fe, Suite G
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Anti-Cdk4 Picoband Antibody

Catalog # ABO12222

Specification

Anti-Cdk4 Picoband Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P11802
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 Na2HPO4, 0.05mg NaN3.

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 mitogenenic 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 Cytomety
- Cell Culture

Anti-Cdk4 Picoband Antibody - Images

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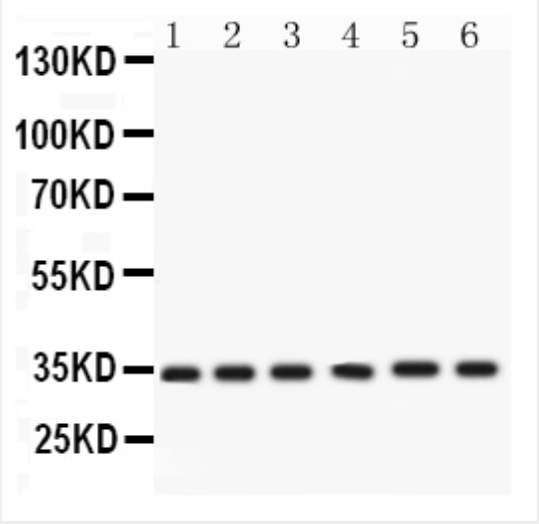
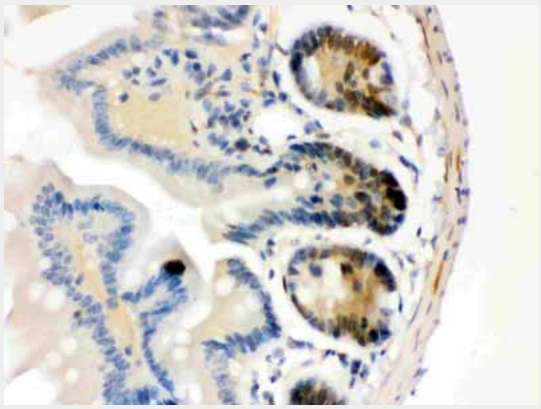
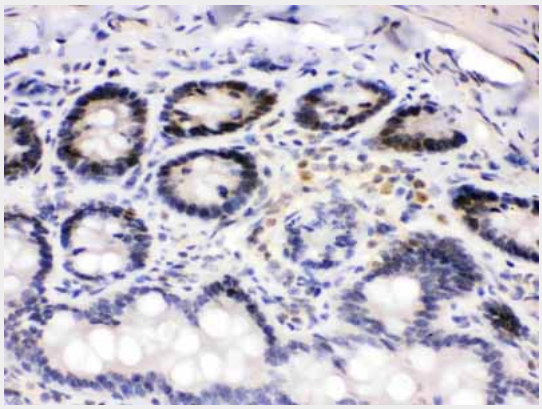


Anti- Cdk4 Picoband antibody, ABO12222, Western blottingAll lanes: Anti Cdk4 (ABO12222) at 0.5ug/mlLane 1: Rat Gaster Tissue Lysate at 50ugLane 2: Rat Thymus Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: A549 Whole Cell Lysate at 40ugLane 5: SKOV Whole Cell Lysate at 40ugLane 6: 22RV1 Whole Cell Lysate at 40ugPredicted bind size: 34KDObserved 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

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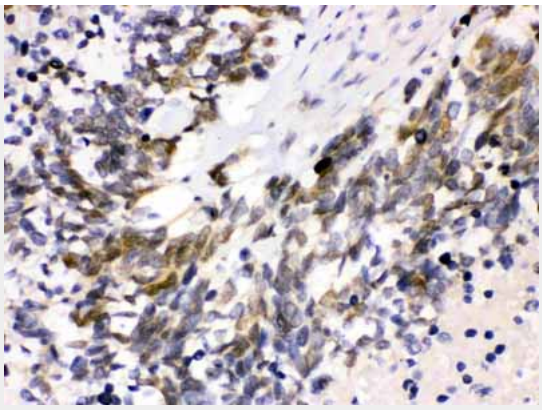

Anti- Cdk4 Picoband antibody, ABO12222, IHC(P)IHC(P): Human Lung Cancer Tissue

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.