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Anti-Cdk4 Antibody
Catalog # ABO10750

Specification

Anti-Cdk4 Antibody - Product Information

Application	**WB**
Primary Accession	P30285
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 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

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 Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

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 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 (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 Cytomety
- Cell Culture

Anti-Cdk4 Antibody - Images

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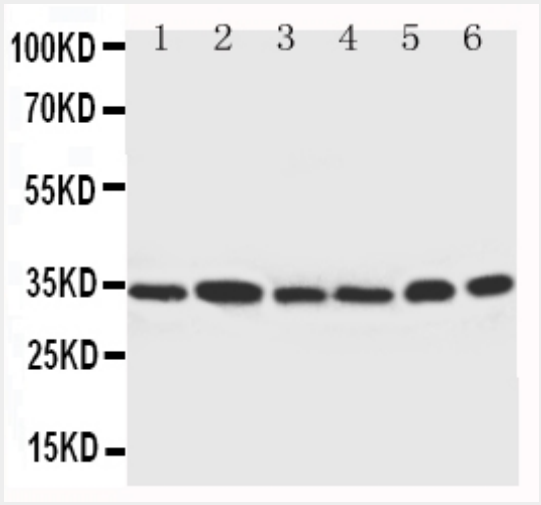

Anti-Cdk4 antibody, ABO10750, Western blottingLane 1: Rat Thymus Tissue LysateLane 2: HELA Cell LysateLane 3: MCF-7 Cell LysateLane 4: A549 Cell LysateLane 5: COLO320 Cell LysateLane 6: JURKAT Cell Lysate

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.