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antibody and ELISA experts

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Anti-Cdk4 Antibody Picoband®

Catalog Number: PB9535

About CDK4

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.

Overview

Product Name	Anti-Cdk4 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Cdk4 Antibody Picoband® catalog # PB9535. Tested in IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P11802

Technical Details

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.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins

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Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunofluorescence, 5 ug/ml, Human

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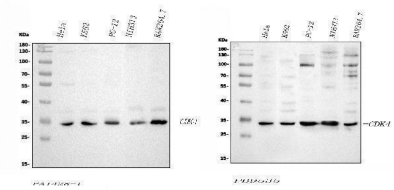
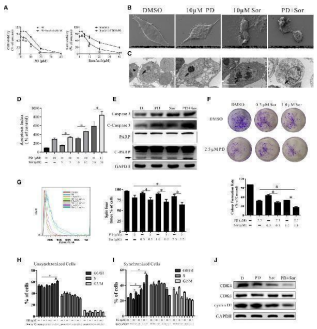
Anti-Cdk4 Antibody Picoband® (PB9535) Images



Western blot analysis of CDK4 using anti-CDK4 antibody (PA1428-1, Left) and anti-CDK4 antibody (PB9535, Right). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: rat PC-12 whole cell lysates, Lane 4: mosue NIH/3T3 whole cell lysates, Lane 5: mosue RAW264.7 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CDK4 antigen affinity purified polyclonal antibody (Catalog # PA1428-1) and rabbit anti-CDK4 antigen affinity purified polyclonal antibody (Catalog # PB9535)at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CDK4 at approximately 34 kDa. The expected band size for CDK4 is at 34 kDa.



PD promotes the anti-tumor effects of sorafenib in PC3 cells. (A) . The effects of PD, sorafenib and PD plus sorafenib on cell viability. (B, C) . The changes in the cell membrane and nucleus after treatment with PD alone, sorafenib (Sor) alone or PD plus sorafenib. (D) . The induction of apoptosis by PD, Sor and PD + Sor. (E) . The protein expression levels of Caspase 3, C-Caspase 3, PARP and C-PARP were examined after cells were treated with 10 uM PD alone, 10 uM sorafenib alone or PD plus sorafenib for 6 h. (F) . The ability of cells to achieve colony growth was assessed after treatment with PD alone, sorafenib alone or PD plus sorafenib for 10 days. (G) . The proliferation of cells was monitored using the CFDA SE assay after treatment with PD alone, sorafenib alone or PD plus sorafenib for 5 days. (H, I) . The cell cycle distribution of PC3 cells following treatment with PD alone, sorafenib alone or PD plus sorafenib for 24 h after pre-treatment with (H) or without (I) 2 mM thymidine. (J) . Changes in the protein expression levels of CDK4, CDK6 and cyclin D1 after treatment with 5 uM PD alone, 2.5 uM sorafenib alone or PD plus sorafenib for 24 h. * p < 0.05.Index in PubMed under a CC BY license. PMID: 34026624

IHC analysis of Cdk4 using anti-Cdk4 antibody (PB9535). Cdk4 was detected in a paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat

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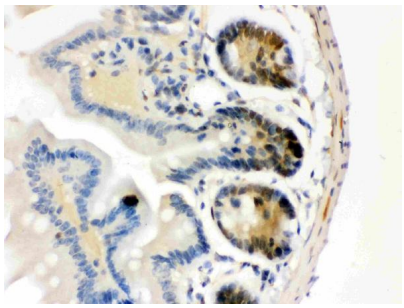
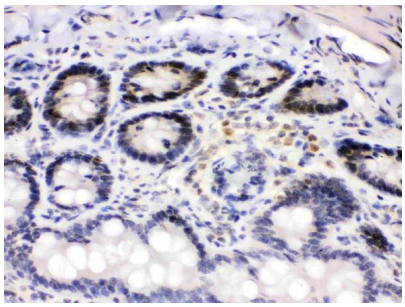
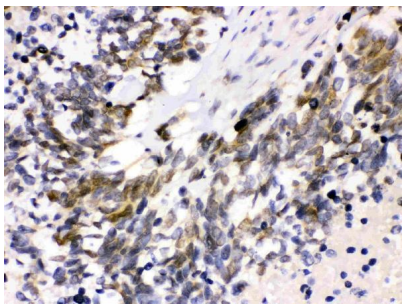


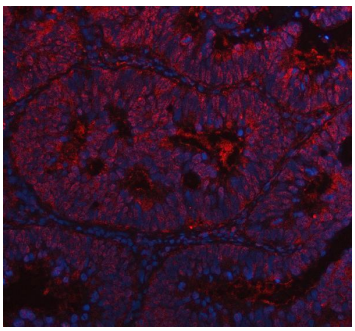
serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Cdk4 Antibody (PB9535) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of Cdk4 using anti-Cdk4 antibody (PB9535). Cdk4 was detected in a paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Cdk4 Antibody (PB9535) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of Cdk4 using anti-Cdk4 antibody (PB9535). Cdk4 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Cdk4 Antibody (PB9535) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of CDK4 using anti-CDK4 antibody (PB9535). CDK4 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-CDK4 Antibody (PB9535) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

19 Publications Citing This Product

1. PubMed ID: 10.3892/or.2016.4935, Platycodin D, a metabolite of Platycodin grandiflorum, inhibits highly metastatic MDA-MB-231 breast cancer growth in vitro and in vivo by targeting the MDM2 oncogene

2. PubMed ID: 10.7150/ijms.3859, Effect of Bone Morphogenetic Protein-2 on Proliferation and Apoptosis of Gastric Cancer Cells

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3. PubMed ID: 10.3389/fonc.2021.648985, Combined Anti-Cancer Effects of Platycodin D and Sorafenib on Androgen-Independent and PTEN-Deficient Prostate Cancer

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Anti-Cdk4 Antibody

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