BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Cyclin-dependent kinase 1 CDK1 Antibody Picoband®

Catalog Number: PA1544

About CDK1

CDC2, Cell Division Cycle 2, is also known as CDK1 (Cyclin-dependent Kinase 1). CDC2 is a catalytic subunit of a protein kinase complex, called the M-phase promoting factor, that induces entry into mitosis and is universal among eukaryotes. In HeLa cells CDC2 is the most abundant phosphotyrosine-containing protein and its phosphotyrosine content is subject to cell cycle regulation. CDC2 gene is located on chromosome 10.

Overview

Product Name	Anti-Cyclin-dependent kinase 1 CDK1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Cyclin-dependent kinase 1 CDK1 Antibody catalog # PA1544. Tested in WB applications. This antibody reacts with Human. 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	WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg 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	P06493

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CDK1, different from the relative rat and mouse sequences by two amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG

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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

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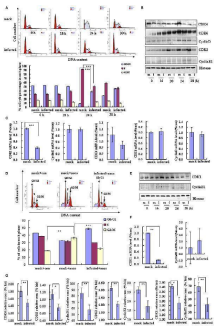
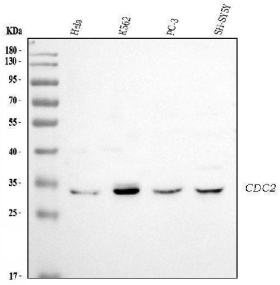
Anti-Cyclin-dependent kinase 1 CDK1 Antibody Picoband® (PA1544) Images



EV-D68 infection prevents cell exit from G0/G1 into S phase and promotes G2/M to G0/G1 transition . (A) RD cells were serum-starved for 24 h and then mock-infected (mock) or infected with EV-D68 Fermon strain (infected) at an MOI of 0.8. After 2 h of virus adsorption, the cells were treated with medium without FBS for 18 h, followed by medium containing 10% FBS. Top panel: The cell cycle profiles were determined by flow cytometry at 0, 18, 24, and 30 h post-infection. Bottom panel: The histograms show the percentage of cells in each phase of the cell cycle. (B) G0/G1 and S phase-related cell cycle proteins were analyzed by western blot analysis. RD cells were mock-infected (m) or infected with EV-D68 Fermon strain at an MOI of 0.8 (i) for 0, 16, 20, 24, and 28 h. Histone is shown as a loading control. Results are representative of three independent experiments. (C) At 24 h post-infection, mRNA levels of CDK2, cyclinE1, CDK4, CDK6, and cyclinD were evaluated in mock infected (mock) and EV-D68 infected (infected) cells by quantitative real-time PCR. The results are standardized to GAPDH and normalized to 1.0 in mock-infected cells. (D) RD cells were treated with 25 ng/mL nocodazole or control medium for 24 h, infected with EV-D68 Fermon strain at an MOI of 0.8 or mock for 2 h and then re-treated with 25 ng/mL nocodazole for synchronization. Top panel: Cell-cycle profiles were determined by flow cytometry. Low panel: The histograms show the percentage of cells in each phase of the cell cycle. (E) G2/M phase-related proteins were detected by western blot analysis. Results are representative of three independent experiments. (F) At 24 h post-infection, mRNA levels of CDK1 and cyclinB1 were assessed in mock-infected (mock) and EV-D68 infected (infected) cells by quantitative real-time PCR. The results are standardized to GAPDH mRNA and normalized to 1.0 in mock-infected cells. (G) At 28 h post-infection, the protein concentration of CDK4, CDK6, cyclinD1, CDK2, cyclinE1, CDK1, cyclinB1, and histone were assessed in mock-infected (mock) and EV-D68 infected (infected) cells by Elisa kit. The results are standardized to Histone (his). The results indicate the mean ± S.D of three independent experiments. * $P < 0.05$, ** $P < 0.01$, and *** $P < 0.001$.Index in PubMed under a CC BY license. PMID: 28229049



Western blot analysis of CDK1 using anti-CDK1 antibody (PA1544). 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: human PC-3 whole cell lysates, Lane 4: human SH-SY5Y 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-CDK1 antigen affinity purified polyclonal

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antibody (Catalog # PA1544) 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 CDK1 at approximately 34 kDa. The expected band size for CDK1 is at 34 kDa.

13 Publications Citing This Product

1. PubMed ID: 26440151, Dietary NiCl2 causes G2/M cell cycle arrest in the broiler's kidney

2. PubMed ID: 27991546, APC/CCDC20 and APC/C play pivotal roles in the process of embryonic development in Artemia sinica

3. PubMed ID: 25734831, Ren J, Huang Q, Xu Y, Yang M, Yang J, Hu K. Anticancer Drugs. 2015 Jul;26(6):599-611. Doi: 10.1097/Cad.0000000000000224. Isoflavone Lupiwighteone Induces Cytotoxic, Apoptotic, And Antiangiogenic Activities In Du-145 Prostate Cancer Cells.

Visit bosterbio.com/anti-cdk1-antibody-pa1544-boster.html to see all 13 publications.

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