

Anti-CDK1 Antibody Picoband™ (monoclonal, 2G11)

Catalog Number: M00209-6

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-CDK1 Antibody Picoband™ (monoclonal, 2G11)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-CDK1 Antibody Picoband™ (monoclonal, 2G11) catalog # M00209-6. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Monoclonal 2G11
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	Mouse
Uniprot ID	P06493

Technical Details

Immunogen	E.coli-derived human CDK1 recombinant protein (Position: L66-M297). Human CDK1 shares 97.8% and 98.3% amino acid (aa) sequence identity with mouse and rat CDK1, respectively.
Predicted Reactive Species	Hepatitis Virus
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	0
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this

kit.

If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.

Some PubMed article(s) citing the expression level of this target are as follows:

Boster Bio's internal QC testing used:

Western blot, 0.1-0.5ug/ml

Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml

Flow Cytometry, 1-3ug/1x10⁶ cells

Anti-CDK1 Antibody Picoband™ (monoclonal, 2G11) (M00209-6) Images

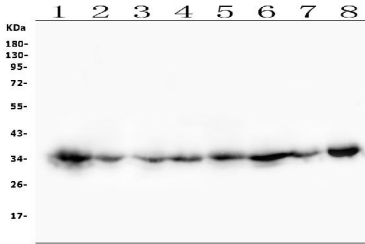


Figure 1. Western blot analysis of CDK1 using anti-CDK1 antibody (M00209-6).

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 50ug of sample under reducing conditions.

Lane 1: human HEK293 whole cell lysates

Lane 2: human A549 whole cell lysates

Lane 3: human HepG2 whole cell lysates

Lane 4: human THP-1 whole cell lysates

Lane 5: human PANC-1 whole cell lysates

Lane 6: human SW620 whole cell lysates

Lane 7: rat RH35 whole cell lysates

Lane 8: mouse NIH/3T3 whole cell lysates

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-CDK1 antigen affinity purified monoclonal antibody (Catalog # M00209-6) 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-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for CDK1 at approximately 34KD. The expected band size for CDK1 is at 34KD.

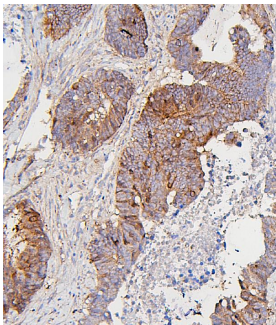


Figure 2. IHC analysis of CDK1 using anti-CDK1 antibody (M00209-6).

CDK1 was detected in paraffin-embedded section of human colon cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CDK1 Antibody (M00209-6) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

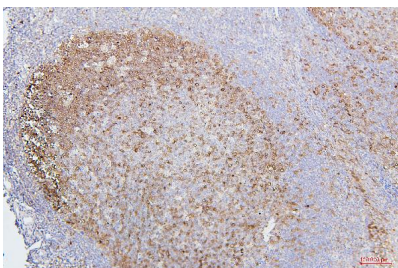


Figure 3. IHC analysis of CDK1 using anti-CDK1 antibody (M00209-6).

CDK1 was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CDK1 Antibody (M00209-6) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

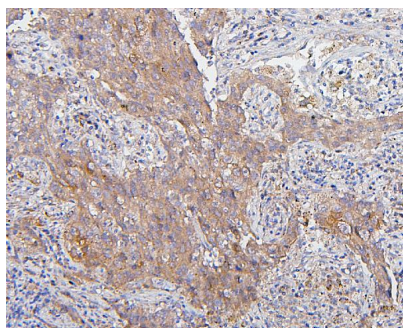


Figure 4. IHC analysis of CDK1 using anti-CDK1 antibody (M00209-6).

CDK1 was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CDK1 Antibody (M00209-6) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

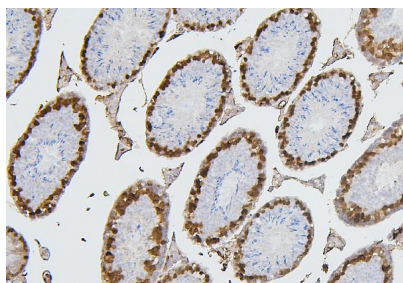


Figure 5. IHC analysis of CDK1 using anti-CDK1 antibody (M00209-6).

CDK1 was detected in paraffin-embedded section of mouse testis tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CDK1 Antibody (M00209-6) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

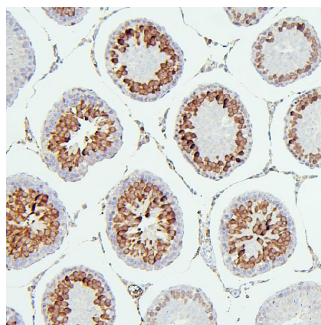


Figure 6. IHC analysis of CDK1 using anti-CDK1 antibody (M00209-6).

CDK1 was detected in paraffin-embedded section of rat testis tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CDK1 Antibody (M00209-6) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

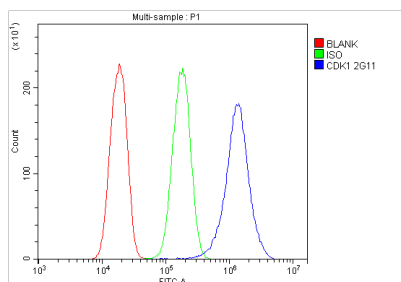


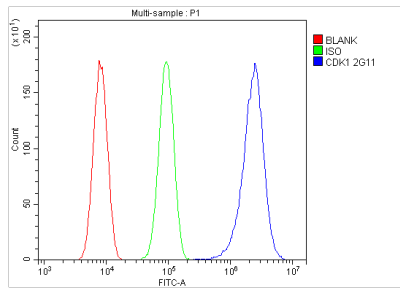
Figure 7. Flow Cytometry analysis of PC-3 cells using anti-CDK1 antibody (M00209-6).

Overlay histogram showing PC-3 cells stained with M00209-6 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-CDK1 Antibody (M00209-6, 1ug/1x10⁶ cells) for 30 min at 20°C.

DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Figure 8. Flow Cytometry analysis of U2OS cells using anti-CDK1 antibody (M00209-6).

Overlay histogram showing U2OS cells stained with



M00209-6 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-CDK1 Antibody (M00209-6, 1 μ g/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 μ g/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 μ g/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

7 Publications Citing This Product

1. PubMed ID: 10.3892/or.2017.5861, Pseudolaric acid B inhibits neuroglioma cell proliferation through DNA damage response
2. PubMed ID: 10.1080/07357900701788130, Suppression of C-myc Expression Associates with Anti-Proliferation of Aloe-Emodin on Gastric Cancer Cells
3. PubMed ID: 33779025, Blakemore D, Vilaplana-Lopera N, Almaghrabi R, Gonzalez E, Moya M, Ward C, Murphy G, Gambus A, Petermann E, Stewart GS, García P. MYBL2 and ATM suppress replication stress in pluripotent stem cells. EMBO Rep. 2021 Mar 28;e51120. doi:10.15252/embr.202051120. Epub ahead of print. PMID:33779025.

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