

Anti-Cyclin D3/CCND3 Antibody Picoband™

Catalog Number: PB9103

About CCND3

CCND3, also called Cyclin D3, is a protein that in humans is encoded by the CCND3 gene. It is mapped to 6p21.1. The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. In addition, overexpression of CCND3 upregulated the translational activity in HeLa cells in a dose-dependent manner.

Overview

Product Name	Anti-Cyclin D3/CCND3 Antibody Picoband™
Reactive Species	Human, Rat
Description	Boster Bio Anti-Cyclin D3/CCND3 Antibody Picoband™ catalog # PB9103. Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Rat.
Application	Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 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	Rabbit
Uniprot ID	P30281

Technical Details

Immunogen	E.coli-derived human Cyclin D3 recombinant protein (Position: Q136-L292). Human Cyclin D3 shares 94% and 93% amino acid (aa) sequences identity with mouse and rat Cyclin D3, respectively.
Predicted Reactive Species	Bovine, Horse, Monkey, Rabbit
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
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
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, Human, Rat Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-Cyclin D3/CCND3 Antibody Picoband™ (PB9103) Images

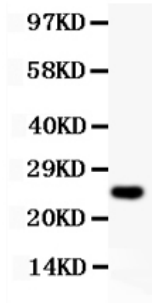


Figure 1. Western blot analysis of Cyclin D3 using anti-Cyclin D3 antibody (PB9103).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.

lane 1: recombinant human Cyclin D3 protein 0.5ng.

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 rabbit anti-Cyclin D3 antigen affinity purified polyclonal antibody (Catalog # PB9103) 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 1:10000 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 Cyclin D3 at approximately 25KD. The expected band size for Cyclin D3 is at 25KD.

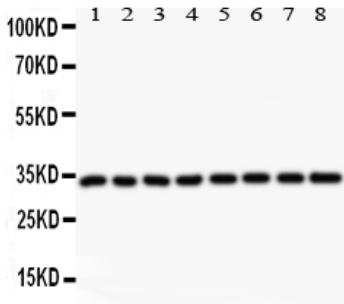


Figure 2. Western blot analysis of Cyclin D4 using anti-Cyclin D4 antibody (PB9103).

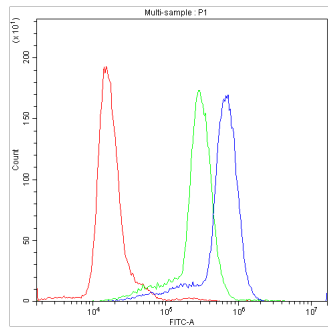
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

lane 1: rat testis tissue lysate,
lane 2: rat thymus tissue lysate,
lane 3: rat lung tissue lysate,
lane 4: rat ovary tissue lysate,
lane 5: JURKAT whole cell lysate,
lane 6: A549 whole cell lysate,
lane 7: MCF-7 whole cell lysate,
lane 8: HELA whole cell lysate.

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 rabbit anti-Cyclin D4 antigen affinity purified polyclonal antibody (Catalog # PB9103) 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 1:10000 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 Cyclin D4 at approximately 33KD. The expected band size for Cyclin D4 is at 33KD.

Figure 3. Flow Cytometry analysis of K562 cells using anti-Cyclin D3 antibody (PB9103).

Overlay histogram showing K562 cells stained with PB9103 (Blue line). The cells were blocked with 10% normal goat



serum. And then incubated with rabbit anti-Cyclin D3 Antibody (PB9103, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

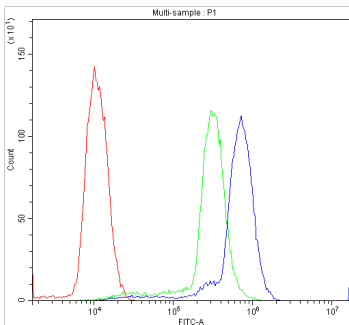


Figure 4. Flow Cytometry analysis of THP-1 cells using anti-Cyclin D3 antibody (PB9103). Overlay histogram showing THP-1 cells stained with PB9103 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Cyclin D3 Antibody (PB9103, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1 Publications Citing This Product

1. PubMed ID: 10.1007/s10616-018-0235-3, Co-culture with TM4 cells enhances the proliferation and migration of rat adipose-derived mesenchymal stem cells with high stemness

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