

Anti-Cyclin D1 Monoclonal Antibody (5D4)

Catalog Number: M00149-2

About CCND1

Recognizes a non-histone protein of 36kDa, which is identified as proliferating cell nuclear antigen (PCNA). It is also known as cyclin or polymerase delta auxiliary protein. Elevated expression of PCNA/cyclin has been shown in the nucleus during late G1 phase immediately before the onset of DNA synthesis, becoming maximal during S-phase and declining during G2 and M phases. This monoclonal antibody is excellent for multiple applications.

Overview

Product Name	Anti-Cyclin D1 Monoclonal Antibody (5D4)
Reactive Species	Human, Mouse
Description	Boster Bio Anti-Cyclin D1 Monoclonal Antibody (5D4) catalog # M00149-2. Tested in Flow Cytometry, IP, IF, IHC, WB applications. This antibody reacts with Human, Mouse.
Conjugate	Biotin
Application	Flow Cytometry, IP, IF, IHC, WB
Clonality	Monoclonal 5D4
Formulation	Liquid. In PBS, pH 7.2, containing 50% glycerol.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P24385

Technical Details

Immunogen	Recombinant human cyclin D1.
Predicted Reactive Species	Chimpanzee
Isotype	IgG2a, kappa
Form	Liquid. In PBS, pH 7.2, containing 50% glycerol.
Concentration	0.5-1mg/ml, actual concentration vary by lot. Use suggested dilution ratio to decide dilution procedure.
Purification	Protein A 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:

Flow Cytometry (10µg/ml final concentration)

Immunohistochemistry (10µg/ml, frozen/paraffin)

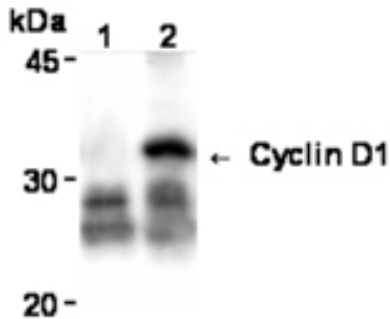
Immunoprecipitation (1-10µg/200µg cell extract from 5×10^6 cells)

Western Blot (1µg/ml, ECL)

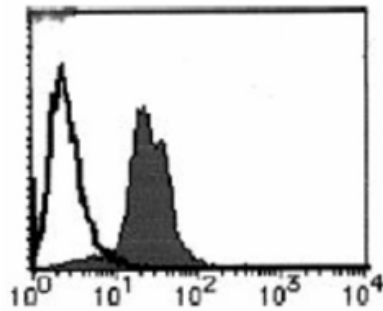
Suggested dilutions/conditions may not be available for all applications.

Optimal conditions must be determined individually for each application.

Anti-Cyclin D1 Monoclonal Antibody (5D4) (M00149-2) Images



Immunoprecipitation analysis of cyclin D1 from ZR75-1 cells with Mouse IgG2a (1) or Cyclin D1 mAb (5D4) (2). After immunoprecipitated with the antibody, immunocomplex was resolved on SDS-PAGE and immunoBlotted with 553.



Flow cytometry analysis of Cyclin D1 isotypic control to the cells. Shaded histogram indicates the reaction of Cyclin D1 mAb (5D4) to the cells.

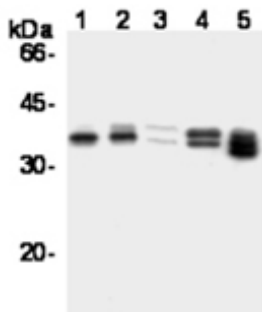


Figure 1. Western blot analysis of CCND1 using anti-CCND1 antibody (M00149-2).

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.

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-CCND1 antigen affinity purified polyclonal antibody (Catalog # M00149-2) 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 # SA1021) with Tanon 5200 system. A specific band was detected for CCND1.

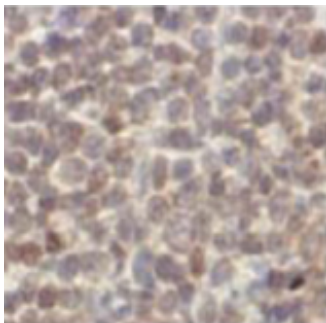


Figure 4. IHC analysis of CCND1 using anti-CCND1 antibody (M00149-2).

CCND1 was detected in paraffin-embedded section. 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 rabbit anti-CCND1 Antibody (M00149-2) overnight at 4°C. Biotinylated goat anti Mouse IgG antibody 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.

21 Publications Citing This Product

1. PubMed ID: 31974617, Wang S,Zhang C,Zhang X.Downregulation of long non-coding RNA ANRIL promotes proliferation and migration in hypoxic human pulmonary artery smooth muscle cells.Mol Med Rep.2020 Feb;21(2):589-596.doi:10.3892/mmr.2019.10887.Epub 2019 Dec 17.PMID:31974617; PMC
2. PubMed ID: 33292254, Wang C,Shao S,Deng L,Wang S,Zhang Y. LncRNA SNHG12 regulates the radiosensitivity of cervical cancer through the miR-148a/CDK1 pathway. Cancer Cell Int.2020 Dec 1;20(1):554.doi:10.1186/s12935-020-01654-5.PMID:33292254;PMCID:PMC7708190.
3. PubMed ID: 24788349, Zhang H, Zhao B, Huang C, Meng Xm, Bian Eb, Li J. Plos One. 2014 May 2;9(5):E95520. Doi: 10.1371/Journal.Pone.0095520. Ecollection 2014. Melittin Restores Pten Expression By Down-Regulating Hdac2 In Human Hepatocellular Carcinoma Hepg2 Cells.

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