

Datasheet for ABIN967426
anti-Cyclin B1 antibody (AA 1-21)

5 Images

13 Publications

[Go to Product page](#)

Overview

Quantity:	0.1 mg
Target:	Cyclin B1 (CCNB1)
Binding Specificity:	AA 1-21
Reactivity:	Human, Mouse, Hamster
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Flow Cytometry (FACS), Immunoprecipitation (IP), BioImaging (BI), Fluorescence Microscopy (FM)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Human Cyclin B1 Recombinant Protein
Clone:	GNS-1
Isotype:	IgG1
Cross-Reactivity:	Hamster, Mouse (Murine)
Characteristics:	<ol style="list-style-type: none">1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.2. Please refer to us for technical protocols.3. This antibody has been developed and certified for the bioimaging application. However, a routine bioimaging test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide

Product Details

compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

5. Triton is a trademark of the Dow Chemical Company.

Purification:

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:

Cyclin B1 (CCNB1)

Alternative Name:

Cyclin B1 ([CCNB1 Products](#))

Background:

Cyclins and cyclin-dependent kinases (cdks) are evolutionarily conserved proteins that are essential for cell-cycle control in eukaryotes. Cyclins (regulatory subunits) bind to cdks (catalytic subunits) to form complexes that regulate the progression of the cell cycle. The main cyclin-cdks complexes formed in vertebrate cells are cyclin D-cdk4 (G0/G1), cyclin E-cdk2 (G1/S), cyclin A-cdk2 (S) and cyclin B1-cdk1 (G2/M). These complexes are regulated by activating and inhibitory phosphorylation events, as well as by interactions with small regulatory proteins, such as p21 and p27 [Kip1]. Cyclin B1 is a mitotic cyclin, where expression is normally low in G0/G1, increases in S and is maximal during the G2/M phase. Cyclin B1 is rapidly degraded at the end of mitosis, and is required for cells to exit from mitosis. This antibody has been reported to react to hamster and mouse cyclin B1. In addition, the GNS-1 antibody has been reported to recognize an epitope between amino acids 1-21 of human cyclin B1.

Molecular Weight:

62 kDa

Pathways:

[Cell Division Cycle](#), [AMPK Signaling](#), [Mitotic G1-G1/S Phases](#), [M Phase](#)

Application Details

Application Notes:

Bioimaging

1. Seed the cells in appropriate culture medium at ~10,000 cells per well in an 96-well Imaging Plate and culture overnight.
2. Remove the culture medium from the wells, and fix the cells by adding 100 µl of Fixation Buffer to each well. Incubate for 10 minutes at room temperature (RT).
3. Remove the fixative from the wells, and permeabilize the cells using either 90% methanol, or Triton™ X-100: a. Add 100 µl of -20°C 90% methanol to each well and incubate for 5 minutes at RT. OR b. Add 100 µl of 0.1% Triton™ X-100 to each well and incubate for 5 minutes at RT.
4. Remove the permeabilization buffer, and wash the wells twice with 100 µl of 1× PBS.

Application Details

5. Remove the PBS, and block the cells by adding 100 myl of to each well. Incubate for 30 min at RT.
6. Remove the blocking buffer and add 50 myl of the optimally titrated primary antibody (diluted in Stain Buffer) to each well, and incubate for 1 hr at RT.
7. Remove the primary antibody, and wash the wells three times with 100 myl of 1× PBS.
8. Remove the PBS, and add the second step reagent at its optimally titrated concentration in 50 myl to each well, and incubate in dark for 1 hr at RT.
9. Remove the second step reagent, and wash the wells three times with 100 myl of 1× PBS.
10. Remove the PBS, and counter-stain the nuclei by adding 200 myl per well of 2 myg/ml Hoechst 33342 in 1× PBS to each well at least 15 min before imaging.
11. View and analyze the cells on an appropriate imaging instrument.

Comment: Related Products: ABIN967389

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 0.5 mg/mL

Buffer: Aqueous buffered solution containing ≤0.09 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C

Storage Comment: Store undiluted at 4°C.

Publications

Product cited in: Durkin, Guo, Fryrear, Mihaylova, Gupta, Belgnaoui, Haoudi, Kupfer, Semmes: "HTLV-1 Tax oncoprotein subverts the cellular DNA damage response via binding to DNA-dependent protein kinase." in: **The Journal of biological chemistry**, Vol. 283, Issue 52, pp. 36311-20, (2008) ([PubMed](#)).

Huston, Lynch, Mohamed, Collins, Hill, MacLeod, Krause, Baillie, Houslay: "EPAC and PKA allow cAMP dual control over DNA-PK nuclear translocation." in: **Proceedings of the National**

Academy of Sciences of the United States of America, Vol. 105, Issue 35, pp. 12791-6, (2008)
([PubMed](#)).

There are more publications referencing this product on: [Product page](#)

Images

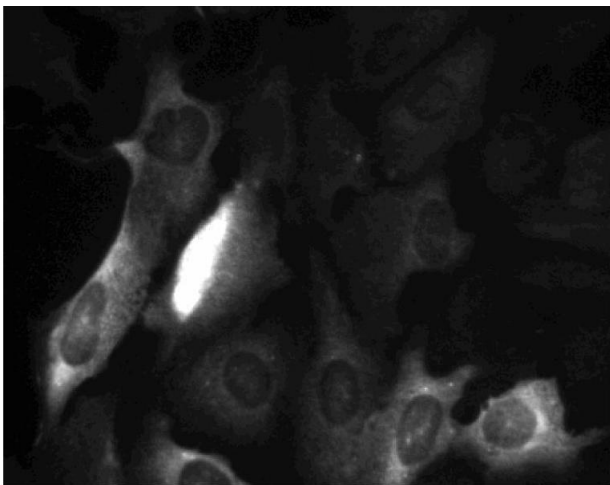
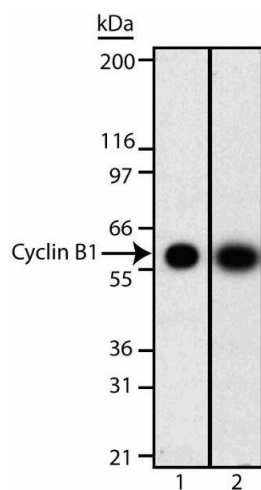


Image 1.

Image 2. Cyclin B1 staining of U-2 OS (ATCC HTB-96) cells. Cells were seeded in a 96 well imaging plate at ~10,000 cells per well. After overnight incubation, cells were stained using the alcohol perm protocol and the anti-cyclin B1 antibody. The second step reagent was Alexa Fluor® 488 goat anti mouse Ig (Invitrogen). Images were taken on a BD Pathway™ 855 Bioimager system using a 20x objective. This antibody also stained A549 (ATCC CCL-185) and HeLa (CCL-2) cells and worked with both the Triton™ X-100 and alcohol perm protocols.



Western Blotting

Image 3. Western blot analysis of cyclin B1. Lane 1: K562 human leukemia cell lysate. Lane 2: 293 human embryonic kidney cell lysate. Anti-human cyclin B1 (ABIN967426) identifies cyclin B1 as an ~62 kDa band.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN967426.