Datasheet for ABIN967426

anti-Cyclin B1 antibody (AA 1-21)

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Overview

Quantity:	0.1 mg
Target:	Cyclin B1 (CCNB1)
Binding Specificity:	AA 1-21
Reactivity:	Human, Mouse, Hamster
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Cyclin B1 antibody is un-conjugated
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:	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.

Product Details

	4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide 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 (catlytic 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 myl 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 myl of -20°C 90% methanol to each well and incubate for 5 minutes at RT. OR b. Add 100 myl of 0.1% Triton™ X-100 to each well and incubate for 5 minutes at RT.

Application Details

	4. Remove the permeabilization buffer, and wash the wells twice with 100 myl of 1× PBS. 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:	Gong, Traganos, Darzynkiewicz: "Expression of cyclins-B and cyclins-e in individual molt-4 cells and in stimulated human-lymphocytes during their progression through the cell-cycle." in: **International journal of oncology**, Vol. 3, Issue 6, pp. 1037-42, (2011) (PubMed). Darzynkiewicz, Gong, Juan, Ardelt, Traganos: "Cytometry of cyclin proteins." in: **Cytometry**, Vol. 25, Issue 1, pp. 1-13, (1997) (PubMed).

Publications

Gong, Traganos, Darzynkiewicz: "Discrimination of G2 and mitotic cells by flow cytometry based on different expression of cyclins A and B1." in: **Experimental cell research**, Vol. 220, Issue 1, pp. 226-31, (1995) (PubMed).

Gong, Ardelt, Traganos, Darzynkiewicz: "Unscheduled expression of cyclin B1 and cyclin E in several leukemic and solid tumor cell lines." in: **Cancer research**, Vol. 54, Issue 16, pp. 4285-8, (1994) (PubMed).

Sherwood, Rush, Kung, Schimke: "Cyclin B1 expression in HeLa S3 cells studied by flow cytometry." in: **Experimental cell research**, Vol. 211, Issue 2, pp. 275-81, (1994) (PubMed).

There are more publications referencing this product on: Product page

Images

Image 1.

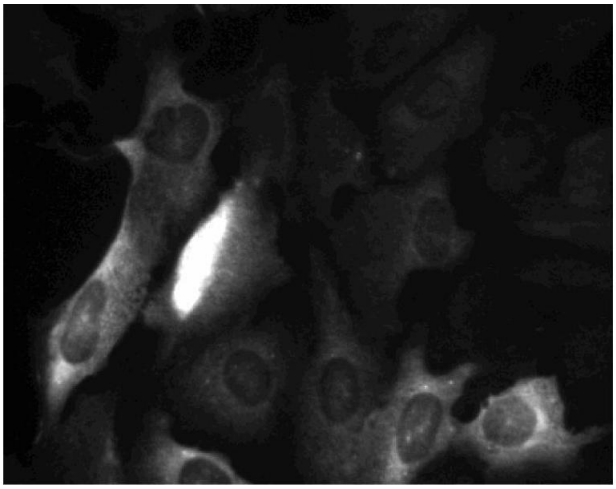
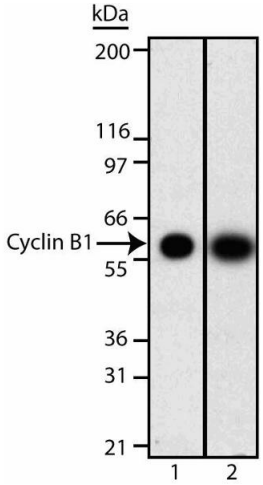


Image 2. Cyclin B1 staining of U-2 OS (ATCC HTB-96) cells. Cells were seeded in a 96 well imaging plate at ~10,000 cells per well. After overnight incubation, cells were stained using the alcohol perm protocol and the anti-cyclin B1 antibody. The second step reagent was Alexa Fluor® 488 goat anti mouse 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.