Human/Mouse Cyclin B1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF6000

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Cyclin B1 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Cyclin B1 Met1-Pro91 Accession # P14635
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

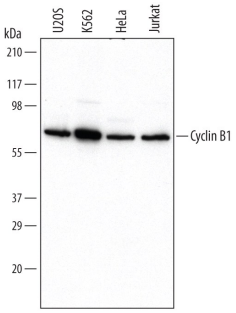
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	2 µg/mL	See Below

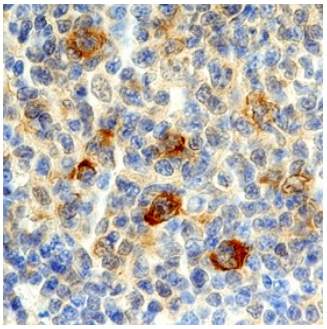
DATA

Western Blot



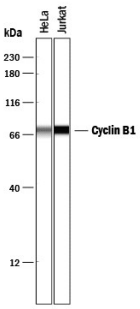
Detection of Human Cyclin B1 by Western Blot. Western blot shows lysates of U2OS human osteosarcoma cell line, K562 human chronic myelogenous leukemia cell line, HeLa human cervical epithelial carcinoma cell line, and Jurkat human acute T cell leukemia cell line. PVDF Membrane was probed with 0.2 µg/mL of Goat Anti-Human/Mouse Cyclin B1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6000) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Cyclin B1 at approximately 62 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Cyclin B1 in Human Lymphoma. Cyclin B1 was detected in immersion fixed paraffin-embedded sections of human lymphoma using Goat Anti-Human/Mouse Cyclin B1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6000) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counter-stained with hematoxylin (blue). Specific staining was localized to cytoplasm in lymphocytes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Simple Western



Detection of Human Cyclin B1 by Simple Western™. Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line and Jurkat human acute T cell leukemia cell line, loaded at 0.2 mg/mL. A specific band was detected for Cyclin B1 at approximately 67 kDa (as indicated) using 2 µg/mL of Goat Anti-Human/Mouse Cyclin B1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6000) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

BACKGROUND

Cyclin B1 (also CCNB1 and G2/mitotic-specific cyclin-B1) is a member of the cyclin AB subfamily, cyclin family of proteins. Although its predicted MW is 50 kDa, it runs anomalously at 62 kDa in SDS-PAGE. Cyclin B1 associates with both CDK1 and 2 providing substrate specificity to a phosphorylating complex. A phosphor-CDK1:Cyclin B1 complex is inactive and cytosolic during interphase. At the beginning of mitosis, CDK1 is dephosphorylated and activated, and the CDK1:Cyclin B1 complex initiates formation of the mitotic scaffold. Human Cyclin B1 is 433 amino acids (aa) in length. It contains two cyclin box folds (aa 201-290 and 298-383) and two substrate binding sites (aa 298-342 and 343-380). Phosphorylation occurs at Ser9, Ser35, Ser69, and Thr321. There is one potential alternative start site at Met252 and deletions of aa 363-399 and 365-433. Over aa 1-91, human Cyclin B1 shares 63% aa identity with mouse Cyclin B1.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956