

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human, mouse, and rat Cyclin D1 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human Cyclin A1, A2, B1, B2, C, D2, D3, E1, or E2 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 608030
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Cyclin D1 Met1-Ile295 Accession # P24385
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

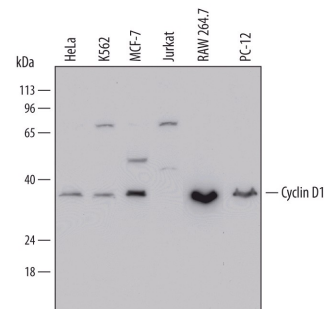
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunohistochemistry</b>	8-25 µg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below

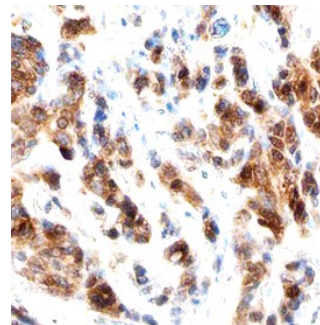
## DATA

### Western Blot



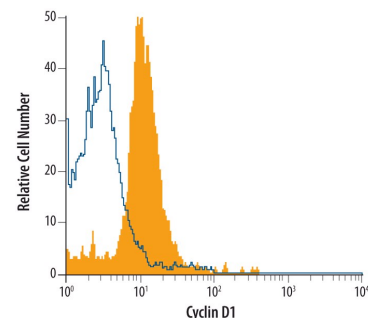
**Detection of Human, Mouse, and Rat Cyclin D1 by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, K562 human chronic myelogenous leukemia cell line, MCF-7 human breast cancer cell line, Jurkat human acute T cell leukemia cell line, RAW 264.7 mouse monocyte/macrophage cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF Membrane was probed with 2 µg/mL of Human Cyclin D1 Monoclonal Antibody (Catalog # MAB43141) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Cyclin D1 at approximately 36 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

### Immunohistochemistry



**Cyclin D1 in Human Breast Cancer Tissue.** Cyclin D1 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Human Cyclin D1 Monoclonal Antibody (Catalog # MAB43141) at 15 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-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to hair follicles and the cytoplasm and nuclei of epithelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Intracellular Staining by Flow Cytometry



**Detection of Cyclin D1 in Daudi Human Cell Line by Flow Cytometry.** Daudi human Burkitt's lymphoma cell line was stained with Human Cyclin D1 Monoclonal Antibody (Catalog # MAB43141, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with PFA and permeabilized with saponin.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month from date of receipt, 2 to 8 °C, reconstituted.</li> <li>6 months from date of receipt, -20 to -70 °C, reconstituted.</li> </ul>

**BACKGROUND**

Cyclin D1 (CCND1) is a 36 kDa cell cycle regulatory protein whose expression level and nuclear/cytoplasmic distribution are tightly regulated in synchrony with the cell cycle. Cyclin D1 complexes containing Cdk4 or Cdk6 induce phosphorylation of Rb, a requirement for progression through the G1/S cell cycle transition. Human Cyclin D1 shares 93% amino acid sequence identity with mouse and rat Cyclin D1.