

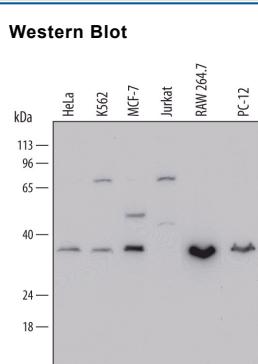
DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Monoclonal Mouse IgG ₁ Clone # 608030
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Cyclin D1 Met1-Ile295 Accession # P24385
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

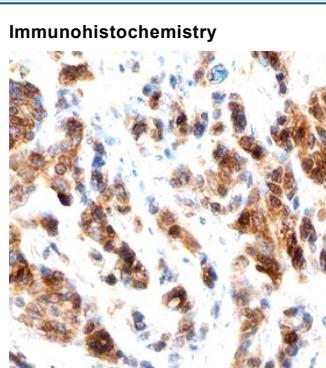
APPLICATIONS

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.

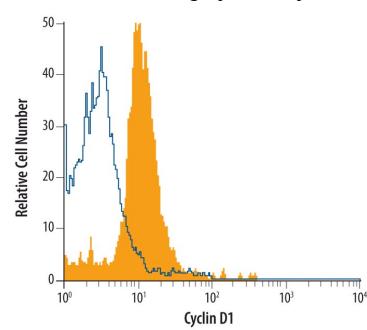
	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10 ⁶ cells	See Below

DATA


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](#).



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

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

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.