



Mouse (monoclonal) Anti-Cyclin D1 Unconjugated

PRODUCT ANALYSIS SHEET

Catalog Number:	AHF0082
Lot Number:	See product label
Expiration Date:	See product label
Quantity/Volume:	100 µg/0.5 mL
Clone Number:	DCS-6
Isotype:	IgG2a kappa (mouse)
Form of Antibody:	Purified immunoglobulin in phosphate buffered saline, pH 7.4, with 0.2% bovine serum albumin.
Preservation:	0.09% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
Purification:	Purified from ascites by Protein A affinity chromatography.
Immunogen:	Human recombinant full length cyclin D1 protein.
Myeloma/Fusion Partners:	Produced by fusion between female BALB/c splenocytes and mouse myeloma NS-2 cells.
Specificity:	This monoclonal antibody recognizes a protein of 36 kDa, identified as cyclin D1 (also known as PRAD-1 or bcl-1). Cyclins are regulatory subunits of the cyclin-dependent kinases (cdk), which control transition at different specific phases of the cell cycle. In mammalian cells, cyclin D1 plays a critical role in G ₁ to S transition. Cyclin D1 is a putative proto-oncogene overexpressed in a wide variety of human neoplasms.
Species Reactivity:	Human, monkey, mouse, rat, and dog cyclin D1. Other species were not tested.
Applications:	This antibody is suitable for use in immunoprecipitation (both non-denatured and denatured), immunofluorescence, and is recommended for immunohistochemistry with cryostat sections, and formalin-fixed or methacarn-fixed paraffin embedded sections. Staining of formalin-fixed paraffin embedded tissue sections requires boiling in 10 mM citrate buffer, pH 6.0, for 10-20 minutes followed by cooling at room temperature for 20 minutes prior to addition of antibody. This antibody is also highly recommended for Western blotting, biological blockade, and flow cytometry.
Suggested Working Dilutions:	For immunoprecipitation, use 10 µL/mg of protein lysate; for immunohistochemistry, use 1:50-1:100; for flow cytometry, use 0.25 µg to stain 10 ⁶ human PBMCs fixed in 100% methanol; and for Western blotting, 1:250-1:500 is recommended. The optimal antibody concentration should be determined for each specific application.
Recommended Positive Control:	T47D, ZR75, BT474, SKBR3, MCF-7, MDA-MB-453, U-2-OS, HT29, Ramos, Jurkat, KNRK, C32 or A431. About 50-70% of mantle cell lymphomas and 40% of breast carcinomas are positive.

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Storage: Store at 2-8°C.

- References:**
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- Bartek, J., *et al.* (1996) Abundance and subcellular localization of cyclin D3 in human tumours. *Int. J. Cancer* 65:323-327.
- De Boer, C.J., *et al.* (1995) Cyclin D1 protein analysis in the diagnosis of mantle cell lymphoma. *Blood* 86(7):2715-2723.
- Depoortere, F., *et al.* (1998) A requirement for cyclin D3-cyclin-dependent kinase (cdk)-4 assembly in the cyclic adenosine monophosphate-dependent proliferation of thyrocytes. *The Journal of Cell Biology* 140(6):1427-1439.
- Jadayel, D.M., *et al.* (1997) Potential role for concurrent abnormalities of the cyclin D1, p16^{CDKN2} and p15^{CDKN2B} genes in certain B cell non-Hodgkin's lymphomas. Functional studies in a cell line (Granta 519). *Leukemia* 11:64-72.
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- Lukas, J., *et al.* (1994) Cyclin D1 protein oscillates and is essential for cell cycle progression in human tumour cell lines. *Oncogene* 9:707-718.
- Niculescu III, A., *et al.* (1998) Effects of p21Cip1/Waf1 at both the G1/S and the G2/M cell cycle transitions: pRb is a critical determinant in blocking DNA replication and in preventing endoreduplication. *Molecular and Cellular Biology* 18(1):629-643.
- Ott, M.M., *et al.* (1997) Cyclin D1 expression in mantle cell lymphoma is accompanied by downregulation of cyclin D3 and is not related to the proliferative activity. *Blood* 90(8):3154-3159.
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Explanation of symbols

Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		<i>In vitro</i> diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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