

Product datasheet for **AM20616PU-N**

Cyclin D1 (CCND1) Mouse Monoclonal Antibody [Clone ID: CY-D1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	CY-D1
Applications:	IF, IHC, WB
Recommended Dilution:	Western Blot: 4 µg/ml. Immunohistochemistry on frozen and paraffin sections: 8 µg/ml. Immunocytochemistry.
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Recombinant human cyclin D1 protein
Specificity:	This antibody reacts to Cyclin D1.
Formulation:	1.2 % sodium acetate, with 2 mg BSA and 0.01 mg sodium azide as preservative. State: Purified State: Lyophilized purified Ig fraction
Reconstitution Method:	Restore with 1.2% sodium acetate or neutral PBS
Concentration:	0,1 mg/ml (after reconstitution with PBS)
Purification:	Affinity chromatography
Conjugation:	Unconjugated
Storage:	Prior to reconstitution store at -20°C. Following reconstitution store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	cyclin D1
Database Link:	Entrez Gene 12443 Mouse Entrez Gene 58919 Rat Entrez Gene 595 Human P24385



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Background:

D-type cyclins (cyclins D1, D2, and D3) are regarded as essential links between cell environment and the core cell cycle machinery. CyclinD1(CCND1), also known as BCL1. Expression of cyclin D1, but not of cyclins A and E, was induced by transfection of the RB gene into RB-deficient tumor cells. cyclin D1 gene can function as an oncogene. Cyclin D1 expression is regulated by the retinoblastoma protein.

The protein belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance throughout the cell cycle. Cyclin D1 encodes the regulatory subunit of a holoenzyme that phosphorylates and inactivates the retinoblastoma protein and promotes progression through the G1-S phase of the cell cycle. Amplification or overexpression of cyclin D1 plays pivotal roles in the development of a subset of human cancers including parathyroid adenoma, breast cancer, colon cancer, lymphoma, melanoma, and prostate cancer. The cyclin D1 gene is overexpressed in human breast cancers and is required for oncogene-induced tumorigenesis. Brisken et al. (2003) found that prolactin induced IGF2 mRNA and IGF2 induced cyclin D1 protein expression in mouse mammary epithelial cultures. And they also concluded that IGF2 is a mediator of prolactin-induced alveologenesis and that prolactin, IGF2, and cyclin D1 are components of a developmental pathway in mammary gland.

Synonyms:

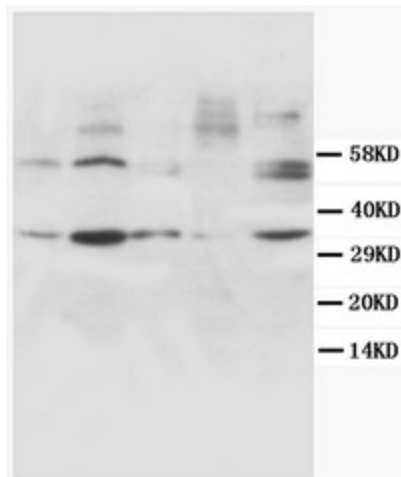
Cyclin-D1, PRAD-1 oncogene, BCL-1 oncogene, CCND1, BCL1, PRAD1

Protein Families:

Druggable Genome, Stem cell - Pluripotency, Stem cell relevant signaling - DSL/Notch pathway, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - Wnt Signaling pathway

Protein Pathways:

Acute myeloid leukemia, Bladder cancer, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, Focal adhesion, Glioma, Jak-STAT signaling pathway, Melanoma, Non-small cell lung cancer, p53 signaling pathway, Pancreatic cancer, Pathways in cancer, Prostate cancer, Small cell lung cancer, Thyroid cancer, Viral myocarditis, Wnt signaling pathway

Product images:

Lane 1: MCF-7 whole cell lysate Lane 2: HeLa whole cell lysate Lane 3: MM231 whole cell lysate Lane 4: MM453 whole cell lysate Lane 5: HT1080 whole cell lysate