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Anti- Cyclin D1 Antibody

Catalog # ABO10620

Product Information

Application	WB
Primary Accession	P24385
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for G1/S-specific cyclin-D1(CCND1) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	595
Other Names	G1/S-specific cyclin-D1, B-cell lymphoma 1 protein, BCL-1, BCL-1 oncogene, PRAD1 oncogene, CCND1, BCL1, PRAD1
Calculated MW	33729
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Nucleus . Cytoplasm . Membrane . Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated to the nucleus through interaction with KIP/CIP family members. .
Source	Eukaryota
Protein Name	G1/S-specific cyclin-D1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Cyclin D1(19-37aa DANLLNDRVLRAMLKAEET), different from the related mouse and rat sequences by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated

	freezing and thawing.
Sequence Similarities	Belongs to the cyclin family. Cyclin D subfamily.

Protein Information

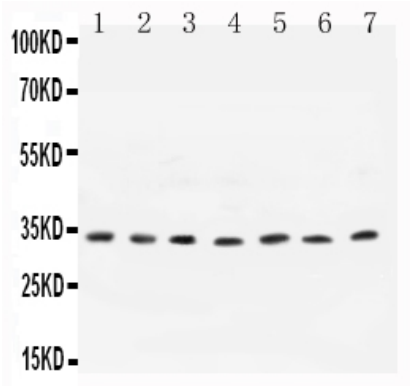
Name	CCND1 {ECO:0000303|PubMed:8204893, ECO:0000312|HGNC:HGNC:1582}
Function	Regulatory component of the cyclin D1-CDK4 (DC) complex that phosphorylates and inhibits members of the retinoblastoma (RB) protein family including RB1 and regulates the cell-cycle during G(1)/S transition (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:33854235, PubMed:8114739, PubMed:8302605). Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complex and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Hypophosphorylates RB1 in early G(1) phase (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8114739, PubMed:8302605). Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals (PubMed:1827756, PubMed:1833066, PubMed:19412162, PubMed:8302605). Also a substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity (PubMed:15241418). Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (PubMed:9106657). Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner (PubMed:16569215, PubMed:18417529).
Cellular Location	Nucleus. Cytoplasm. Nucleus membrane. Note=Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated to the nucleus through interaction with KIP/CIP family members

Background

Cyclin D1, also known as CCND1, is a human gene. The protein encoded by this gene 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 (PRL; 176760) induced IGF2 (147470) 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.

Images

Anti- Cyclin D1 antibody, ABO10620, All Western blottingAll lanes: Anti-CCND1(ABO10620) at 0.5ug/mlLane 1: Rat Testis Tissue Lysate at 40ugLane 2: Human Placenta Tissue Lysate at 40ugLane 3: Rat Brain Tissue Lysate at 40ugLane 4: MCF-7 Whole Cell Lysate at 40ugLane 5: COLO320 Whole Cell Lysate at 40ugLane 6: SW620 Whole



Cell Lysate at 40ugLane 7: MM231 Whole Cell Lysate at 40ugPredicted bind size: 33KDObserved bind size: 33KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.