Rabbit Cyclin D1 Polyclonal Antibody | anti-CCND1 antibody

Phospho-Cyclin D1 (Thr286) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321278	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

Cyclin D1; Polyclonal Antibody; Phospho-Cyclin D1 (Thr286) Antibody; AI327039; B cell CLL/lymphoma 1; B cell leukemia 1; B cell lymphoma 1 protein; B-cell lymphoma 1 protein; BCL 1; BCL-1; BCL-1 oncogene; BCL1; BCL1 oncogene; ccnd1; CCND1/FSTL3 fusion gene; included; CCND1/IGHG1 fusion gene; CCND1/IGLC1 fusion gene; CCND1/PTH fusion gene; CCND1_HUMAN; cD1; Cyl 1; D11S287E; G1/S specific cyclin D1; G1/S-specific cyclin-D1; Parathyroid adenomatosis 1; PRAD1; PRAD1 oncogene; U21B31; anti-CCND1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-Cyclin D1 (Thr286) antibody detects endogenous levels of Cyclin D1 only when phosphorylated at Threonine 286
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	295
Applicable Applications for anti-CCND1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Cyclin D1 around the phosphorylation site of Threonine 286
Subcellular Location	Nucleus.
Conjugation	Unconjugated
Epitope	Phospho Thr286
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IF (Immunofluorescence)
AAA321278 staining HT-1080 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

WB (Western Blot)
Western blot analysis of Cyclin D1 phosphorylation expression in MCF7 whole cell lysates, The lane on the right is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-CCND1 antibody	Description: 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. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. 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 G1/S transition. 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 G1 phase. Hypophosphorylates RB1 in early G1 phase. Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals. Also substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity. Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex. Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner. Subunit Structure: Interacts with FBXO4 (By similarity). Interacts with either CDK4 or CDK6 protein kinase to form a serine/threonine kinase holoenzyme complex. The cyclin subunit imparts substrate specificity to the complex. Component of the ternary complex CCND1/CDK4/CDKN1B required for nuclear translocation and modulation of CDK4-mediated kinase activity. Interacts directly with CDKN1B. Interacts with UHRF2; the interaction ubiquitinates CCND1 and appears to occur independently of phosphorylation. Can form similar complexes with either CDKN1A or CDKN2A. Interacts with USP2. Interacts (via cyclin N-terminal domain) with INSM1 (via N-terminal region); the interaction competes with the binding of CCND1 to CDK4 during cell cycle progression and inhibits CDK4 activity. Interacts with CDK4; the interaction is prevented with the binding of CCND1 to INSM1 during cell cycle progression. Post-translational Modifications: Phosphorylation at Thr-286 by MAP kinases is required for ubiquitination and degradation following DNA damage. It probably plays an essential role for recognition by the FBXO31 component of SCF (SKP1-cullin-F-box) protein ligase complex. Ubiquitinated, primarily as 'Lys-48'-linked polyubiquitination. Ubiquitinated by a SCF (SKP1-CUL1-F-box protein) ubiquitin-protein ligase complex containing FBXO4 and CRYAB. Following DNA damage it is ubiquitinated by some SCF (SKP1-cullin-F-box) protein ligase complex containing FBXO31. SCF-type ubiquitination is dependent on Thr-286 phosphorylation (By similarity). Ubiquitinated also by UHRF2 apparently in a phosphorylation-independent manner. Ubiquitination leads to its degradation and G1 arrest. Deubiquitinated by USP2; leading to its stabilization. Similarity: Belongs to the cyclin family. Cyclin D subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	16950655
NCBI GeneID	595
NCBI Accession #	NP_444284.1
NCBI GenBank Nucleotide #	NM_053056.2
UniProt Accession #	P24385; Q6LEF0
Molecular Weight	Observed: 33 kDa Predicted: 34 kDa
NCBI Official Full Name	G1/S-specific cyclin-D1

NCBI Official Synonym Full Names	cyclin D1
NCBI Official Symbol	CCND1
NCBI Official Synonym Symbols	BCL1; PRAD1; U21B31; D11S287E
NCBI Protein Information	G1/S-specific cyclin-D1
UniProt Protein Name	G1/S-specific cyclin-D1
UniProt Gene Name	**CCND1**
UniProt Synonym Gene Names	BCL1; PRAD1; BCL-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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