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CCND1 Antibody (C-term T288)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20024b

Product Information

Application	WB, E
Primary Accession	P24385
Other Accession	NP_444284.1
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	33729
Antigen Region	267-294

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
Target/Specificity	This CCND1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 267-294 amino acids from the C-terminal region of human CCND1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CCND1 Antibody (C-term T288) is for research use only and not for use in diagnostic or therapeutic procedures.

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 mitogenic 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

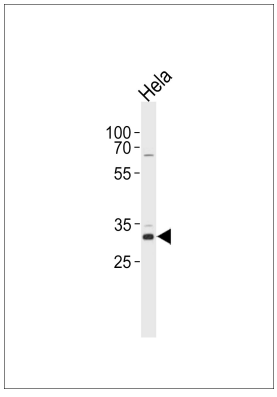
Background

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. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis.

References

Aggarwal, P., et al. Cancer Cell 18(4):329-340(2010) Iwatani, K., et al. Biochem. Biophys. Res. Commun. 400(3):426-431(2010) Halilovic, E., et al. Cancer Res. 70(17):6804-6814(2010) Zheng, W., et al. Anal. Quant. Cytol. Histol. 32(3):155-160(2010) Satiroglu-Tufan, N.L., et al. Genet. Mol. Res. 9(3):1557-1567(2010)

Images



CCND1 Antibody (T288) (Cat. #AP20024b) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the CCND1 antibody detected the CCND1 protein (arrow).

Citations

- TRAF4 enhances oral squamous cell carcinoma cell growth, invasion and migration by Wnt-β-catenin signaling pathway.