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CCND2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14421a

Product Information

Application	WB, E
Primary Accession	P30279
Other Accession	NP_001750.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34394
Calculated MW	33067
Antigen Region	1-30

Additional Information

Gene ID	894
Other Names	G1/S-specific cyclin-D2, CCND2
Target/Specificity	This CCND2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human CCND2.
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	CCND2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CCND2 {ECO:0000303|PubMed:1386336, ECO:0000312|HGNC:HGNC:1583}
Function	Regulatory component of the cyclin D2-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:18827403, PubMed:8114739). 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:18827403, PubMed:8114739). Hypophosphorylates RB1 in early G(1) phase (PubMed:18827403, PubMed:8114739). Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals (PubMed:18827403, PubMed:8114739).
Cellular Location	Nucleus. Cytoplasm. Nucleus membrane. Note=Cyclin D-CDK4 complexes accumulate at the nuclear membrane and are then translocated into the nucleus through interaction with KIP/CIP family members

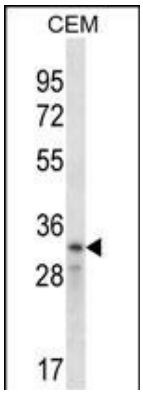
Background

The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through 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 and be involved in the phosphorylation of tumor suppressor protein Rb. Knockout studies of the homologous gene in mouse suggest the essential roles of this gene in ovarian granulosa and germ cell proliferation. High level expression of this gene was observed in ovarian and testicular tumors.

References

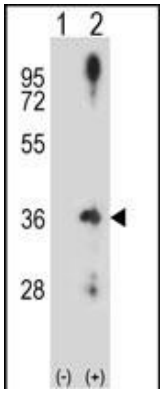
Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Park, T.J., et al. J. Hum. Genet. 55(7):416-420(2010)
Kamatani, Y., et al. Nat. Genet. 42(3):210-215(2010)
Johnatty, S.E., et al. PLoS Genet. 6 (7), E1001016 (2010) :
Kosmaczewska, A., et al. Oncol. Res. 18 (2-3), 127-131 (2009) :

Images



CCND2 Antibody (N-term) (Cat. #AP14421a) western blot analysis in CEM cell line lysates (35ug/lane).This demonstrates the CCND2 antibody detected the CCND2 protein (arrow).

Western blot analysis of CCND2 (arrow) using rabbit polyclonal CCND2 Antibody (N-term) (Cat. #AP14421a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CCND2 gene.



Citations

- HNF4α is a therapeutic target that links AMPK to WNT signalling in early-stage gastric cancer.