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[Primary Antibody]

Rabbit Anti-Cyclin D2 antibody

Catalog Number: SL1148R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Cyclin D2
Immunogen:	KLH conjugated synthetic peptide derived from the middle of human Cyclin D2: 161-288/288
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 Flow-Cyt=5μg/Test （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human, Rat, (predicted: Mouse)
Predicted MW.:	35kDa
Subcellular Location:	The nucleus cytoplasmic The cell membrane
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

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

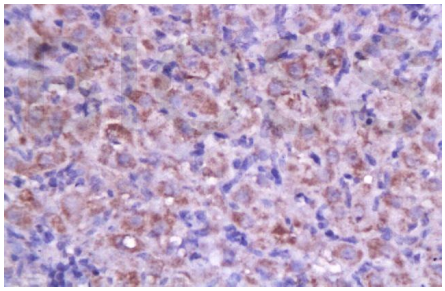
	tumorigenesis. **Function:** Regulatory component of the cyclin D2-CDK4 (DC) complex that phosphorylates and inhibits members of the retinoblastoma (RB) protein family including RB1 and regulates the cell-cycle during G1/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor 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 mitogenenic 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 D2/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex. **Subunit:** 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 cyclin D/CDK4/CDKN1B required for nuclear translocation and modulation of CDK4-mediated kinase activity. **Subcellular Location:** Nucleus. Cytoplasm. 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. **Similarity:** Belongs to the cyclin family. Cyclin D subfamily. Contains 1 cyclin N-terminal domain. **Database links:** **Entrez Gene:** 894 Human **Entrez Gene:** 12444 Mouse **Entrez Gene:** 64033 Rat Omim: 123833 Human **SwissProt:** P30279 Human **SwissProt:** P30280 Mouse **SwissProt:** Q04827 Rat **Unigene:** 376071 Human **Unigene:** 333406 Mouse **Unigene:** 96083 Rat Cyclin D2Like cyclin D1, it is an important regulatory factor for the G1-to-S phase transition in the cell cycle. Cyclins are regulatory factors of cyclin-dependent kinases, and different cyclins control different specific stages of the cell cycle. Cyclin D2 promotes DNA synthesis and accelerates cell proliferation by activating CdK4 or CdK6, etc. It is mainly used in research on

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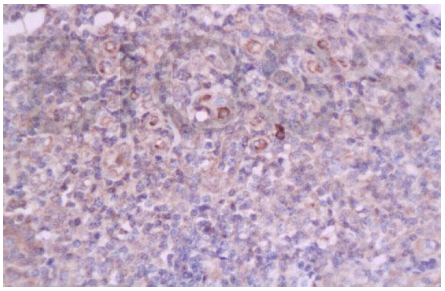
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	malignant Tumour such as B-cell lymphoma, breast cancer, head and neck squamous cell carcinoma, esophageal cancer, liver cancer, and lung cancer.

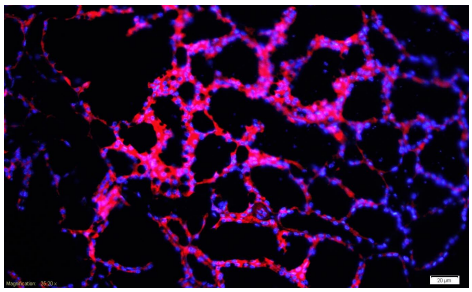
[VALIDATION IMAGES]



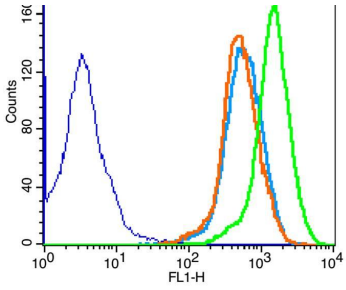
Tissue/cell: rat ovary tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Cyclin D2 Polyclonal Antibody, Unconjugated(SL1148R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: human flat moss tinea tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Cyclin D2 Polyclonal Antibody, Unconjugated(SL1148R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rat mammary tissue;4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Cyclin D2 Polyclonal Antibody, Unconjugated(SL1148R) 1:200, overnight at 4°C; The secondary antibody was Goat Anti-Rabbit IgG, PE conjugated (SL0295G-PE)used at 1:200 dilution for 40 minutes at 37°C. DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei



The figure annotation:
The blue histogram is unstained cells.
The Wathet Blue histogram is cells stained with secondary antibody(SL0295G-FITC) alone.
The Orange histogram is cells stained with rabbit IgG isotype control(SL0295P) antibody plus secondary antibody.
The green histogram is cells stained with Rabbit Anti-Cyclin D2 antibody (SL1148R)plus secondary antibody.
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Concebtration: 5μg/10^6 cells.
Positive control: MCF-7 cells.

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