

## Rabbit Anti-Cyclin D3 antibody

SL0660R

<b>Product Name</b>	Cyclin D3
<b>Chinese Name</b>	周期素 D3 抗体
<b>Alias</b>	CCND3; CyclinD3; D3 type cyclin; G1 S specific cyclin D3; CCND3_HUMAN; G1/S-specific cyclin-D3.
<b>Research Area</b>	Tumour Cell biology Cyclin Epigenetics
<b>Immunogen Species</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>React Species</b>	Human, Mouse, Rat, (predicted: Dog, Pig, Cow, Rabbit, ) WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
<b>Applications</b>	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Theoretical molecular weight</b>	32kDa
<b>Cellular localization</b>	The nucleus cytoplasmic The cell membrane
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>immunogen</b>	KLH conjugated synthetic peptide derived from human Cyclin D3: 121-220/292
<b>Lsotype</b>	IgG
<b>Purification</b>	affinity purified by Protein A
<b>Buffer Solution</b>	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
<b>Storage</b>	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
<b>Attention</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>PubMed</b>	<a href="#">PubMed</a>
<b>Product</b>	The protein encoded by this gene belongs to the highly conserved cyclin family, whose

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**Detail**

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. The CDK4 activity associated with this cyclin was reported to be necessary for cell cycle progression through G2 phase into mitosis after UV radiation. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2008]

**Function:**

Regulatory component of the cyclin D3-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. 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. Hypophosphorylates RB1 in early G(1) 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 D3/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex.

**Subunit:**

Interacts with the CDK4 and CDK6 protein kinases to form a serine/threonine kinase holoenzyme complex. The cyclin subunit imparts substrate specificity to the complex. Interacts with ATF5. Interacts with EIF3K. Component of the ternary complex cyclin D/CDK4/CDKN1B required for nuclear translocation and modulation of CDK4-mediated kinase activity. Can form similar complexes with either CDKN1A or CDKN2A.

**Subcellular Location:**

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.

**Post-translational modifications:**

Polyubiquitinated by the SCF(FBXL2) complex, leading to proteasomal degradation.

**Similarity:**

Belongs to the cyclin family. Cyclin D subfamily.  
Contains 1 cyclin N-terminal domain.

**SWISS:**

P30281

**Gene ID:**  
896

**Database links:**

[Entrez Gene: 540547](#) Cow

[Entrez Gene: 896](#) Human

[Entrez Gene: 12445](#) Mouse

[Entrez Gene: 25193](#) Rat

[Omim: 123834](#) Human

[SwissProt: Q3MHH5](#) Cow

[SwissProt: P30281](#) Human

[SwissProt: P30282](#) Mouse

[SwissProt: P48961](#) Rat

[Unigene: 534307](#) Human

[Unigene: 27291](#) Mouse

[Unigene: 472101](#) Mouse

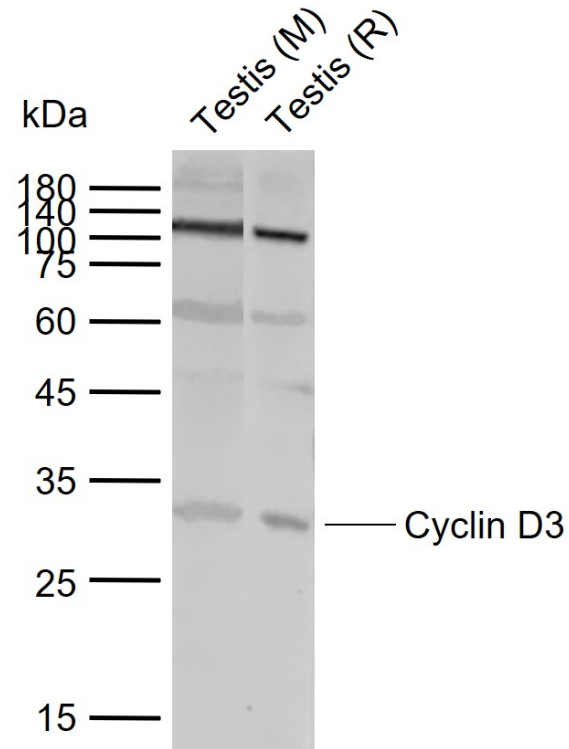
[Unigene: 3483](#) Rat

[Unigene: 54319](#) Rat

细胞周期素是周期素依赖激酶的调节因子，不同的细胞周期素控制着细胞周期中不同的特定阶段。

周期素 D3 与周期素 D1 和 D2 一样，为细胞周期中 G1 期进入 S 期的一个重要调控因子，通过激活 CdK4 或 CdK6 等作用，促进 DNA 合成，加速细胞增殖，主要用于 B 细胞淋巴瘤、乳腺癌、头颈部鳞癌、食道癌、肝癌和肺癌等恶性 Tumour 的研究。

**Product  
Picture**



Sample:

Lane 1: Mouse Testis tissue lysates

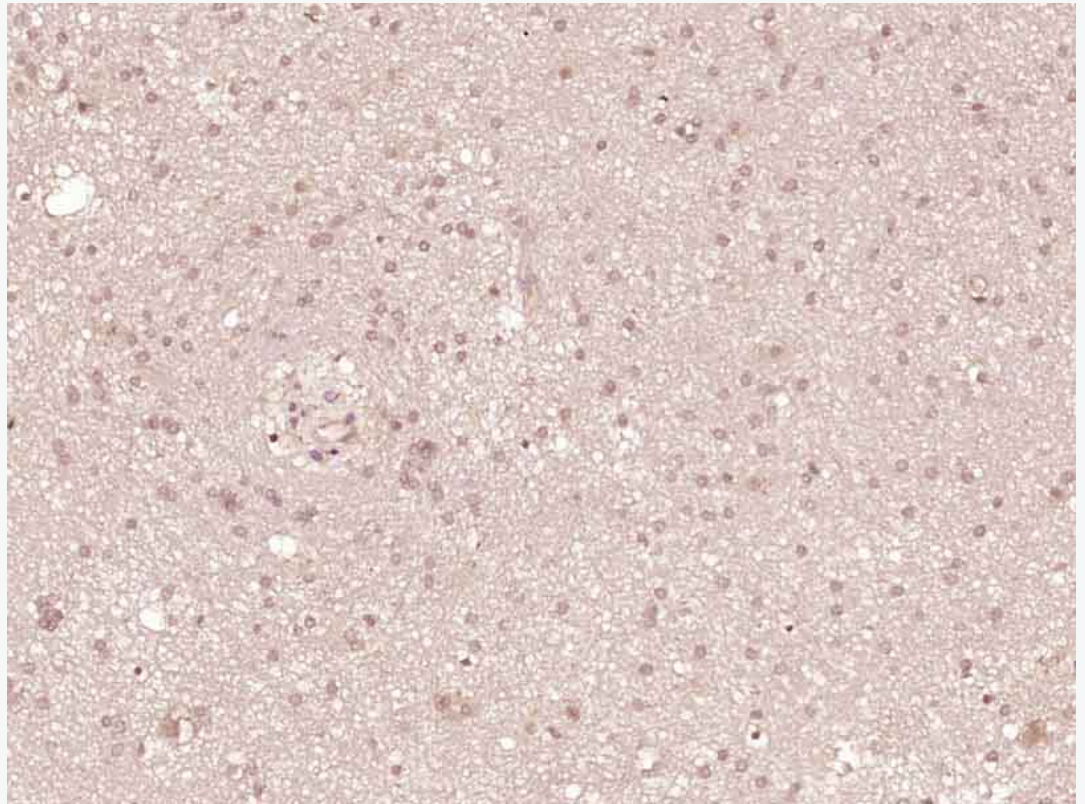
Lane 2: Rat Testis tissue lysates

Primary: Anti-Cyclin D3 (SL0660R) at 1/1000 dilution

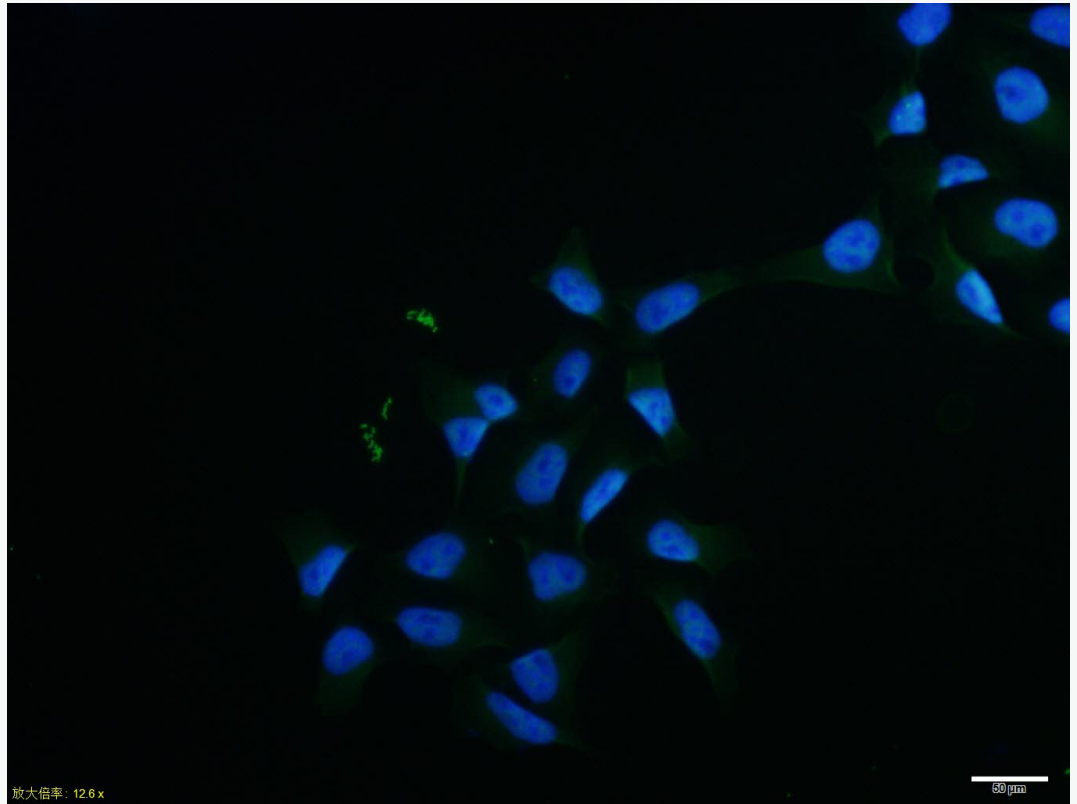
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 32 kDa

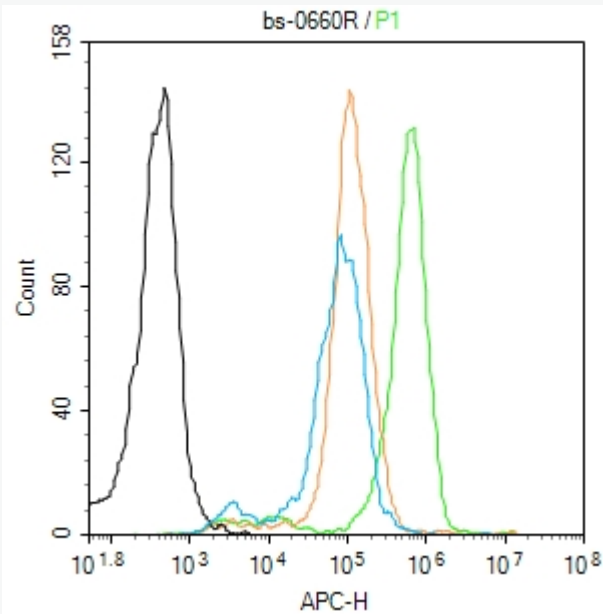
Observed band size: 32 kDa



Paraformaldehyde-fixed, paraffin embedded (Human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Cyclin D3) Polyclonal Antibody, Unconjugated (SL0660R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Hela cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (Cyclin D3) polyclonal Antibody, Unconjugated (SL0660R) 1:100, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Blank control:Molt-4.

Primary Antibody (green line): Rabbit Anti-Cyclin D3 antibody (SL0660R)

Dilution: 1 $\mu$ g /10<sup>6</sup> cells;

Isotype Control Antibody (orange line): Rabbit IgG .

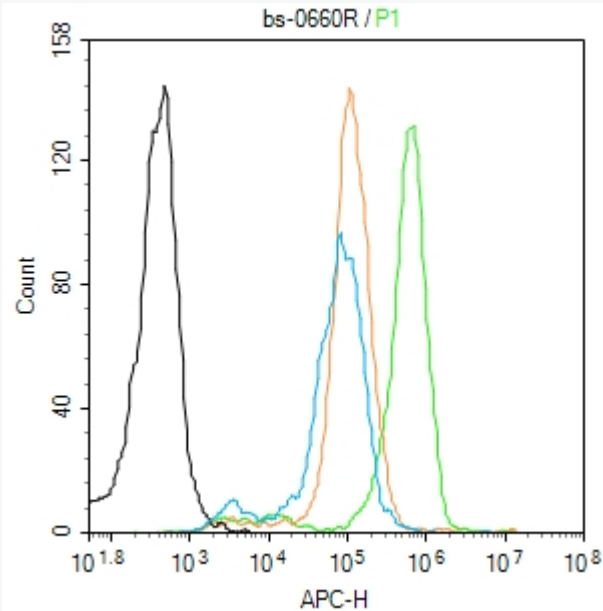
Secondary Antibody : Goat anti-rabbit IgG-AF647

Dilution: 1 $\mu$ g /test.

#### Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.



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Dilution: 1 $\mu$ g /10<sup>6</sup> cells;

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Secondary Antibody : Goat anti-rabbit IgG-AF647

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