

# Anti-Cyclin D2 Antibody [PSH16-53] - BSA and Azide free

## HA751602



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 33 kDa
<b>Clone number:</b>	PSH16-53

**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 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 CDK4 or CDK6 and functions as a regulatory subunit of the complex, 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. Mutations in this gene are associated with megalencephaly-polymicrogyria-polydactyly-hydrocephalus syndrome 3 (MPPH3).

**Immunogen:** Recombinant protein within human Cyclin D2 aa 1-289.

**Positive control:** HeLa cell lysate, RD cell lysate, U-2 OS cell lysate, Caco-2 cell lysate, NIH/3T3 cell lysate, Mouse brain tissue lysate, Rat brain tissue lysate, human diffuse large B-cell lymphoma tissue, human spleen tissue, mouse spleen tissue, rat spleen tissue, HeLa, NIH/3T3.

**Subcellular location:** Nucleus, Cytoplasm, Nucleus membrane.

**Database links:** SwissProt: P30279 Human | P30280 Mouse | Q04827 Rat

**Recommended Dilutions:**

<b>WB</b>	1:5,000
<b>IHC-P</b>	1:1,000
<b>FC</b>	1:1,000

**Storage Buffer:** 1\*PBS (pH7.4).

**Storage Instruction:** Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

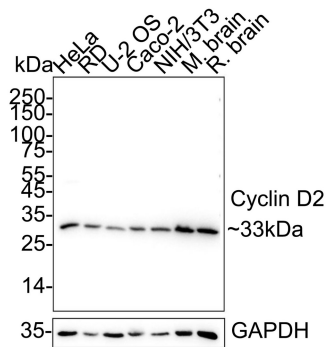
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**Fig1:** Western blot analysis of Cyclin D2 on different lysates with Rabbit anti-Cyclin D2 antibody (HA751602) at 1/5,000 dilution.



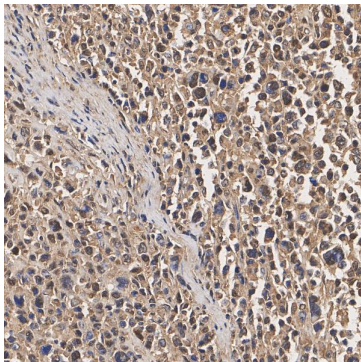
Lane 1: HeLa cell lysate (20 µg/Lane)  
 Lane 2: RD cell lysate (20 µg/Lane)  
 Lane 3: U-2 OS cell lysate (20 µg/Lane)  
 Lane 4: Caco-2 cell lysate (20 µg/Lane)  
 Lane 5: NIH/3T3 cell lysate (20 µg/Lane)  
 Lane 6: Mouse brain tissue lysate (40 µg/Lane)  
 Lane 7: Rat brain tissue lysate (40 µg/Lane)

Predicted band size: 33 kDa  
 Observed band size: 33 kDa

Exposure time: 4 seconds; ECL: K1801;

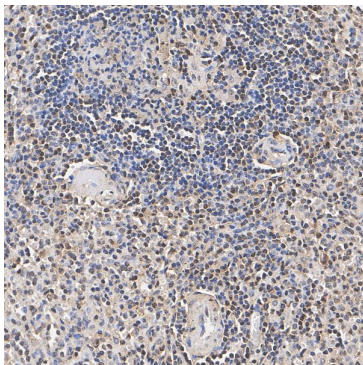
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA751602) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.



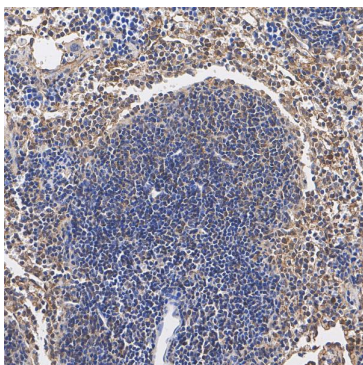
**Fig2:** Immunohistochemical analysis of paraffin-embedded human diffuse large B-cell lymphoma tissue with Rabbit anti-Cyclin D2 antibody (HA751602) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA751602) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



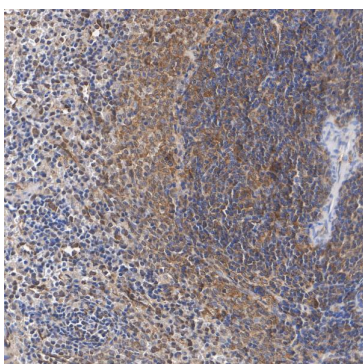
**Fig3:** Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rabbit anti-Cyclin D2 antibody (HA751602) at 1/1,1000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA751602) at 1/1,1000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



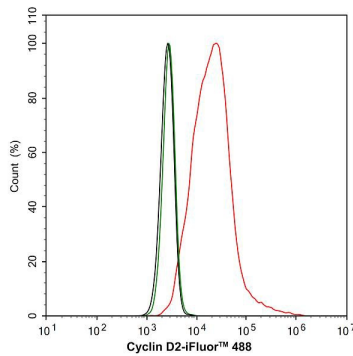
**Fig4:** Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rabbit anti-Cyclin D2 antibody (HA751602) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA751602) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



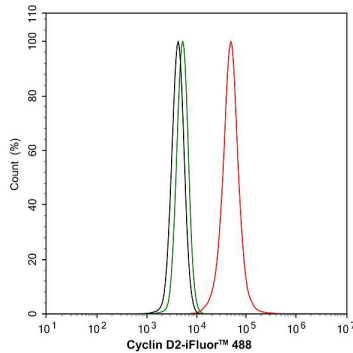
**Fig5:** Immunohistochemical analysis of paraffin-embedded rat spleen tissue with Rabbit anti-Cyclin D2 antibody (HA751602) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA751602) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig6:** Flow cytometric analysis of HeLa cells labeling Cyclin D2.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA751602, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).



**Fig7:** Flow cytometric analysis of NIH/3T3 cells labeling Cyclin D2.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA751602, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. Zhao M et al. Cyclin D2 Overexpression Enhances the Efficacy of Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes for Myocardial Repair in a Swine Model of Myocardial Infarction. *Circulation*. 2021 Jul
2. Pieters T et al. Cyclin D2 overexpression drives B1a-derived MCL-like lymphoma in mice. *J Exp Med*. 2021 Oct

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