

# Anti-Phospho-CDK1 (T161) Antibody [PSH03-42] - BSA and Azide free

## HA750876



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IF-Cell, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 34 kDa
<b>Clone number:</b>	PSH03-42

**Description:** Cyclin-dependent kinase 1 also known as CDK1 or cell division cycle protein 2 homolog is a highly conserved protein that functions as a serine/threonine protein kinase, and is a key player in cell cycle regulation. It has been highly studied in the budding yeast *S. cerevisiae*, and the fission yeast *S. pombe*, where it is encoded by genes *cdc28* and *cdc2*, respectively. With its cyclin partners, Cdk1 forms complexes that phosphorylate a variety of target substrates (over 75 have been identified in budding yeast); phosphorylation of these proteins leads to cell cycle progression.

**Immunogen:** Synthetic phosphopeptide corresponding to residues surrounding Thr161 of CDK1.

**Positive control:** HeLa cell lysate, HeLa treated with 100nM Calyculin A for 30 minutes cell lysate, Jurkat cell lysate, Jurkat treated with 100nM Calyculin A for 30 minutes cell lysate, NIH/3T3 cell lysate, NIH/3T3 treated with 100nM Calyculin A for 30 minutes cell lysate, PC-12 cell lysate, PC-12 treated with UV for 1 hour cell lysate, human cervix cancer tissue, Jurkat cells treated with 100nM Calyculin A for 30 minutes, HeLa cells treated with 100nM Calyculin A for 30 minutes, NIH/3T3 cells treated with 100nM Calyculin A for 30 minutes.

**Subcellular location:** Nucleus, Mitochondrion, Cytoplasm, cytoskeleton, microtubule organizing center, spindle.

**Database links:** SwissProt: P06493 Human | P11440 Mouse | P39951 Rat

**Recommended Dilutions:**

<b>WB</b>	1:2,000
<b>IF-Cell</b>	1:2,500
<b>IHC-P</b>	1:200
<b>FC</b>	1:100

**Storage Buffer:** 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.

Orders:0086-571-88062880

Technical:0086-571-89986345

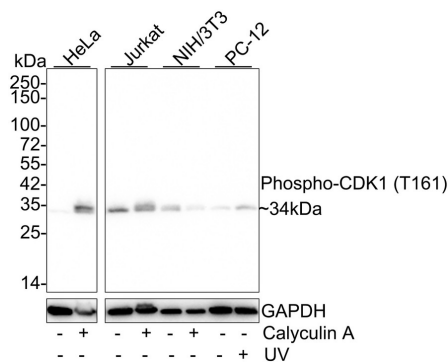
Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn

Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

**Fig1:** Western blot analysis of Phospho-CDK1 (T161) on different lysates with Rabbit anti-Phospho-CDK1 (T161) antibody (HA750876) at 1/2,000 dilution.



Lane 1: HeLa cell lysate  
Lane 2: HeLa treated with 100nM Calyculin A for 30 minutes cell lysate  
Lane 3: Jurkat cell lysate  
Lane 4: Jurkat treated with 100nM Calyculin A for 30 minutes cell lysate  
Lane 5: NIH/3T3 cell lysate  
Lane 6: NIH/3T3 treated with 100nM Calyculin A for 30 minutes cell lysate  
Lane 7: PC-12 cell lysate  
Lane 8: PC-12 treated with UV for 1 hour cell lysate

Lysates/proteins at 30 µg/Lane.

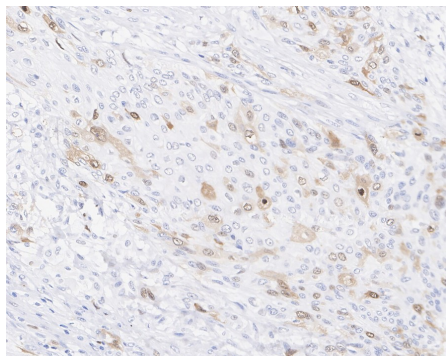
Predicted band size: 34 kDa  
Observed band size: 34 kDa

Exposure time: 5 minutes;

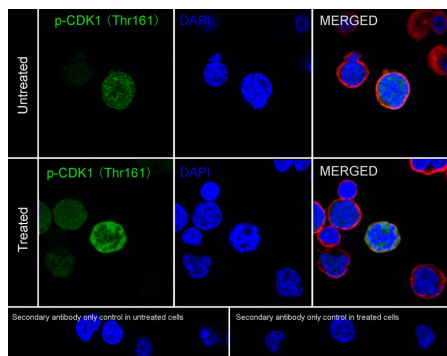
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750876) at 1/2,000 dilution was used in 5% NFDM/TBST 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 cervix cancer tissue with Rabbit anti-Phospho-CDK1 (T161) antibody (HA750876) at 1/200 dilution.



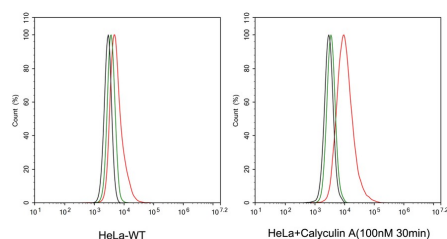
The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA750876) at 1/200 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:** Immunocytochemistry analysis of Jurkat cells treated with or without 100nM Calyculin A for 30 minutes labeling Phospho-CDK1 (T161) with Rabbit anti-Phospho-CDK1 (T161) antibody (HA750876) at 1/2,500 dilution.

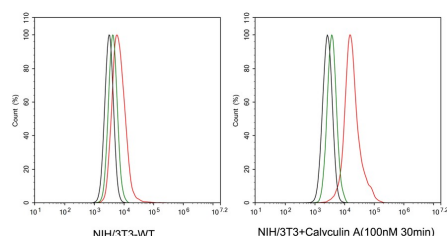
Cells were fixed in 100% precooled methanol for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Phospho-CDK1 (T161) antibody (HA750876) at 1/2,500 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4 °C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.



**Fig4:** Flow cytometric analysis of HeLa cells treated with or without 100nM Calyculin A for 30 minutes labeling Phospho-CDK1 (T161).

Cells were fixed and permeabilized. Then stained with the primary antibody (HA750876, 1/100) (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).



**Fig5:** Flow cytometric analysis of NIH/3T3 cells treated with or without 100nM Calyculin A for 30 minutes labeling Phospho-CDK1 (T161).

Cells were fixed and permeabilized. Then stained with the primary antibody (HA750876, 1/100) (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. Haneke K et al. CDK1 couples proliferation with protein synthesis. J Cell Biol. 2020 Mar
2. Michowski W et al. Cdk1 Controls Global Epigenetic Landscape in Embryonic Stem Cells. Mol Cell. 2020 May

**Hangzhou Huaan Biotechnology Co., Ltd.**

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

 华安生物  
HUAABIO  
www.huabio.cn

Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation