

# P21 Polyclonal antibody

Catalog Number: 10355-1-AP

Featured Product

673 Publications

## Basic Information

<b>Catalog Number:</b> 10355-1-AP	<b>GenBank Accession Number:</b> BC000275	<b>Purification Method:</b> Antigen affinity purification
<b>Size:</b> 150ul, Concentration: 900 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 1026	<b>Recommended Dilutions:</b> WB 1:1000-1:4000 IP 0.5-4.0 µg for 1.0-3.0 mg of total protein lysate IHC 1:200-1:600 IF 1:50-1:500
<b>Source:</b> Rabbit	<b>Full Name:</b> cyclin-dependent kinase inhibitor 1A (p21, Cip1)	
<b>Isotype:</b> IgG	<b>Calculated MW:</b> 18 kDa	
<b>Immunogen Catalog Number:</b> AG0368	<b>Observed MW:</b> 21 kDa	

## Applications

**Tested Applications:**  
FC, IF, IHC, IP, WB, ELISA

**Cited Applications:**  
CoIP, FC, IF, IHC, IP, WB

**Species Specificity:**  
human

**Cited Species:**  
human, rabbit, pig, Artemia sinica, canine

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB:** HUVEC cells, MCF-7 cells, HeLa cells, HEK-293 cells, HepG2 cells, THP-1 cells, LNCaP cells, NCCIT cells, U2OS cells

**IP:** MCF-7 cells,

**IHC:** human cervical cancer tissue, human breast cancer tissue, human colon cancer tissue, human thyroid cancer tissue, human stomach cancer tissue, human kidney tissue

**IF:** MCF-7 cells, myotome of a somite at E11.5 tissue

## Background Information

CDKN1A (p21, CIP1, WAF1) is a cyclin-dependent kinase inhibitor. CDKN1A binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at the G1 phase. The expression of CDKN1A is induced by wild-type but not mutant p53 protein, through which CDKN1A mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. CDKN1A can interact with proliferating cell nuclear antigen (PCNA), and plays a regulatory role in S phase DNA replication and DNA damage repair. CDKN1A was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of CDK2, and may be instrumental in the execution of apoptosis following caspase activation. Two alternatively spliced variants, which encode an identical protein, have been reported.

## Notable Publications

Author	Pubmed ID	Journal	Application
Jing Zhao	32986180	Biotechnol Lett	WB
Shengya Tian	31562192	Life Sci Alliance	WB
Wei Zhao	29212181	Oncotarget	WB

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

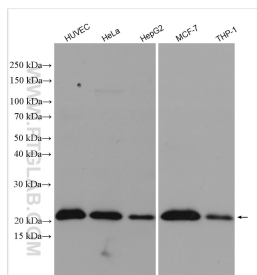
Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

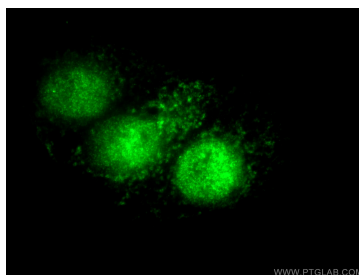
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

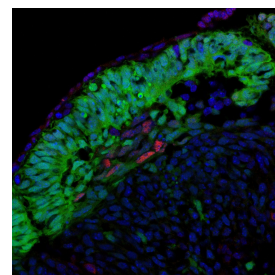
## Selected Validation Data



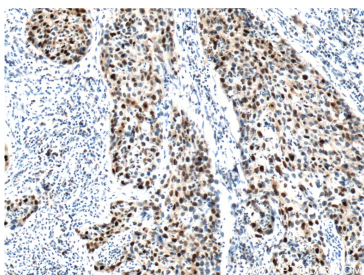
Various lysates were subjected to SDS PAGE followed by western blot with 10355-1-AP (P21 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



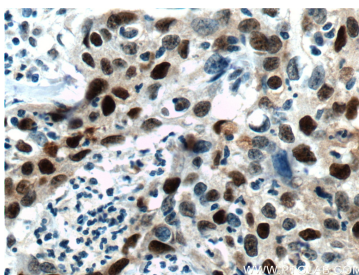
Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using 10355-1-AP (P21;CDKN1A antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



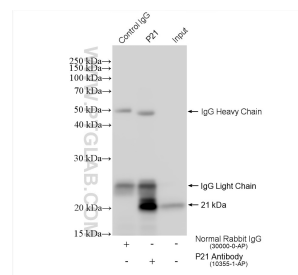
IF result of anti-p21 (CDKN1A, 10355-1-AP) in the myotome of a somite at E11.5 by Dr. Zalc A. and Dr. Relaix F. (Red = p21; Green=Pax3 from a GFP reporter; Blue=DAPI).



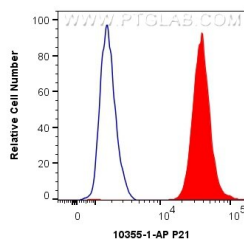
Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue slide using 10355-1-AP (P21;CDKN1A Antibody) at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue slide using 10355-1-AP (P21;CDKN1A Antibody) at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP result of anti-P21(IP:10355-1-AP, 4ug; Detection:10355-1-AP 1:2000) with MCF-7 cells lysate 1880 ug.



1X10<sup>6</sup> MCF-7 cells were intracellularly stained with 0.4 ug Anti-Human P21 (10355-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).