

For Research Use Only

# P21 Polyclonal antibody

Catalog Number: 10355-1-AP

Featured Product

681 Publications



## Basic Information

### Catalog Number:

10355-1-AP

### Size:

900 µg/ml

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG0368

### GenBank Accession Number:

BC000275

### GeneID (NCBI):

1026

### UNIPROT ID:

P38936

### Full Name:

cyclin-dependent kinase inhibitor 1A (p21, Cip1)

### Calculated MW:

18 kDa

### Observed MW:

21 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

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

## Applications

### Tested Applications:

FC, IF/ICC, IHC, IP, WB, ELISA

### Cited Applications:

WB, IP, IF, FC, IHC, CoIP

### 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

For technical support and original validation data for this product please contact:

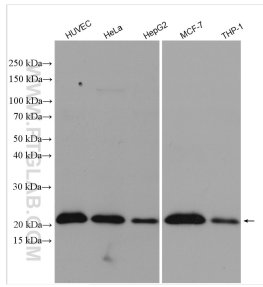
T: 4006900926

E: Proteintech-CN@ptglab.com

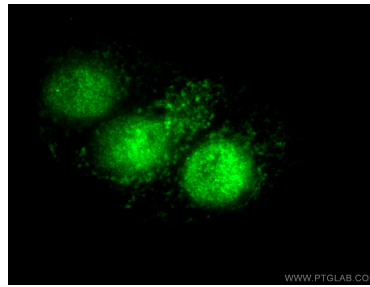
W: ptgcn.com

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

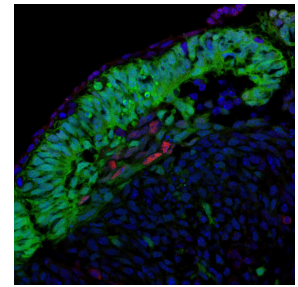
## Selected Validation Data



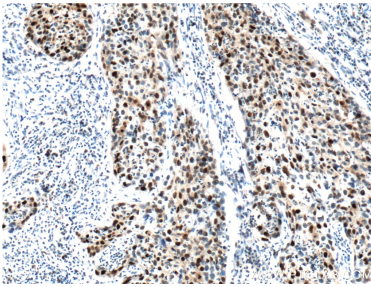
Various lysates were subjected to SDS PAGE followed by western blot with 10355-1-AP (P21 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



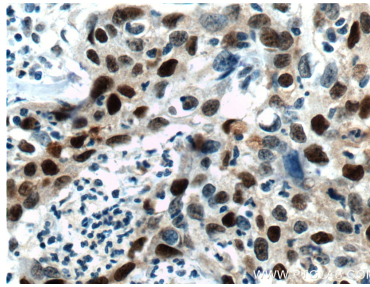
Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using 10355-1-AP (P21;CDKN1A antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



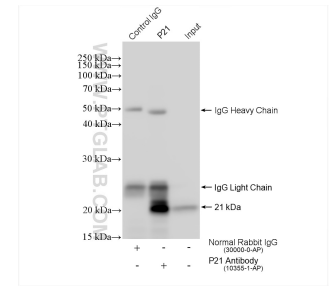
IF result of anti-p21 (CDKN1A, 10355-1-AP) in the myotome of a somite at E11.5 by Dr. Zalc A. and Dr. Relaix F. (Red = p21; Green=Pax3 from a GFP reporter; Blue=DAPI).



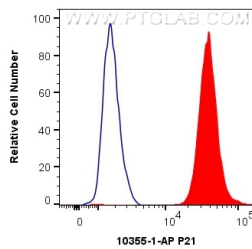
Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue slide using 10355-1-AP (P21;CDKN1A Antibody) at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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.



$1 \times 10^6$  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).