

For Research Use Only

P21 Polyclonal antibody

Catalog Number: 10355-1-AP

Featured Product

905 Publications



Basic Information

Catalog Number:

10355-1-AP

Size:

150ul, Concentration: 900 ug/ml by Nanodrop;

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 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:5000-1:20000

IF-P: 1:10-1:100

IF/ICC: 1:200-1:800

FC (Intra): 0.40 ug per 10⁶ cells in a 100 µl suspension

Applications

Tested Applications:

WB, IHC, IF/ICC, IF-P, FC (Intra), IP, ELISA

Cited Applications:

WB, IHC, IF, IP, ColP, Cell treatment

Species Specificity:

human

Cited Species:

human, pig, rabbit, canine, bovine, artemia sinica

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 colon cancer tissue, human kidney tissue, human breast cancer tissue, human stomach cancer tissue, human thyroid cancer tissue

IF-P: myotome of a somite at E11.5 tissue,

IF/ICC: MCF-7 cells,

FC (Intra): MCF-7 cells,

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, pH7.3

Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

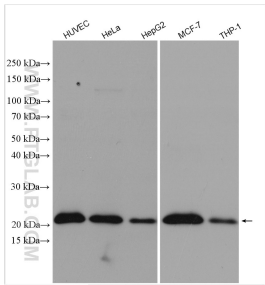
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

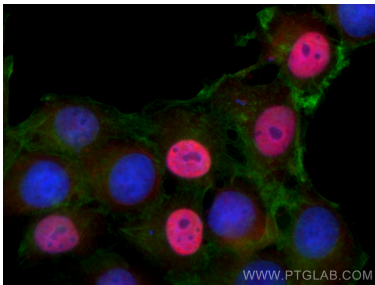
E: proteintech@ptglab.com
W: ptglab.com

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

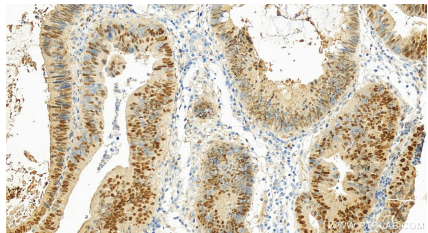
Selected Validation Data



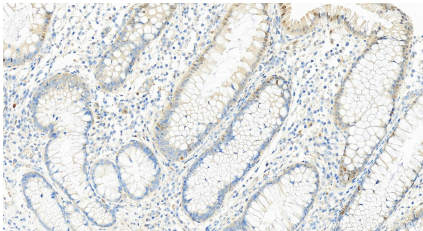
Various lysates were subjected to SDS PAGE followed by western blot with 10355-1-AP (P21 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



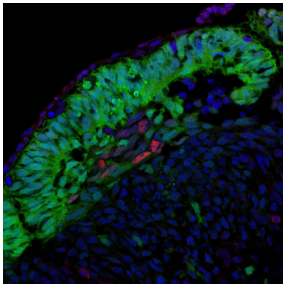
Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using P21 antibody (10355-1-AP) at dilution of 1:400 and CoraLite®594-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-4), CL488-phalloidin (green).



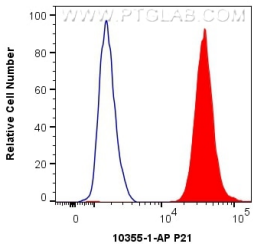
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 10355-1-AP (P21 antibody) at dilution of 1:10000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



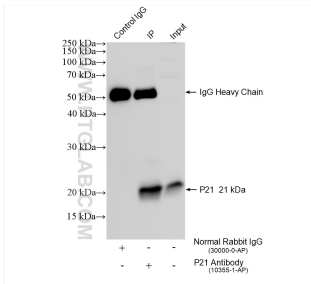
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 10355-1-AP (P21 antibody) at dilution of 1:10000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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).



1X10⁶ 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).



IP result of anti-P21 (IP:10355-1-AP, 4ug; Detection:10355-1-AP 1:1000) with MCF-7 cells lysate 1085 ug.