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p21 (CDKN1A) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7527b

Specification

p21 (CDKN1A) Antibody (C-term) - Product Information

Application	**IF, WB, IHC-P, FC,E**
Primary Accession	P38936
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**18119**
Antigen Region	**134-164**

p21 (CDKN1A) Antibody (C-term) - Additional Information

Gene ID 1026

Other Names
Cyclin-dependent kinase inhibitor 1, CDK-interacting protein 1, Melanoma differentiation-associated protein 6, MDA-6, p21, CDKN1A, CAP20, CDKN1, CIP1, MDA6, PIC1, SDI1, WAF1

Target/Specificity
This p21 (CDKN1A) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 134-164 amino acids from the C-terminal region of human p21 (CDKN1A).

Dilution
IF~~1:10~50
WB~~1:1000
IHC-P~~1:50~100
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
p21 (CDKN1A) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

p21 (CDKN1A) Antibody (C-term) - Protein Information

Name CDKN1A (HGNC:1784)

Function Plays an important role in controlling cell cycle progression and DNA damage-induced G2 arrest (PubMed:9106657). Involved in p53/TP53 mediated inhibition of cellular proliferation in response to DNA damage. Also involved in p53-independent DNA damage-induced G2 arrest mediated by CREB3L1 in astrocytes and osteoblasts (By similarity). Binds to and inhibits cyclin-dependent kinase activity, preventing phosphorylation of critical cyclin-dependent kinase substrates and blocking cell cycle progression. Functions in the nuclear localization and assembly of cyclin D-CDK4 complex and promotes its kinase activity towards RB1. At higher stoichiometric ratios, inhibits the kinase activity of the cyclin D-CDK4 complex. Inhibits DNA synthesis by DNA polymerase delta by competing with POLD3 for PCNA binding (PubMed:11595739). Negatively regulates the CDK4- and CDK6-driven phosphorylation of RB1 in keratinocytes, thereby resulting in the release of E2F1 and subsequent transcription of E2F1-driven G1/S phase promoting genes (By similarity).

Cellular Location
Cytoplasm. Nucleus

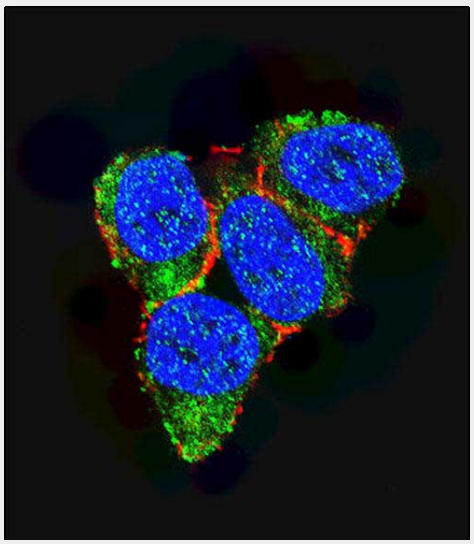
Tissue Location
Expressed in all adult tissues, with 5-fold lower levels observed in the brain

p21 (CDKN1A) Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

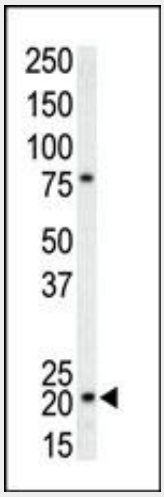
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

p21 (CDKN1A) Antibody (C-term) - Images

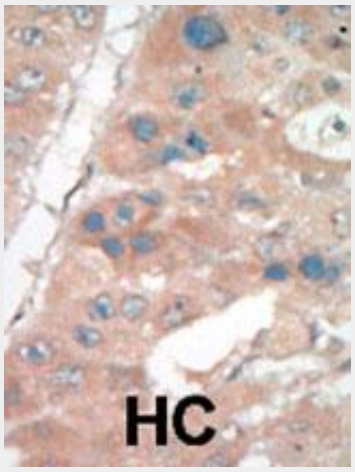


Confocal immunofluorescent analysis of p21 (CDKN1A) Antibody (C-term)(Cat#AP7527b) with 293

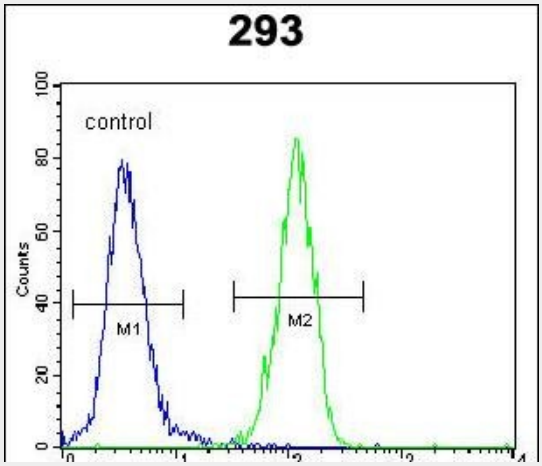
cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).



The anti-CDKN1A Pab (Cat. #AP7527b) is used in Western blot to detect CDKN1A in T-47D cell lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



p21 (CDKN1A) Antibody (C-term) (Cat. #AP7527b) flow cytometric analysis of 293 cells (right

histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

p21 (CDKN1A) Antibody (C-term) - Background

CDKN1A is a potent cyclin-dependent kinase inhibitor. It binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. Expression is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen (PCNA), a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein 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.

p21 (CDKN1A) Antibody (C-term) - References

Fukuchi, K., et al., Biochim. Biophys. Acta 1642(3):163-171 (2003).
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