

P21Cip1 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9311a

Specification

P21Cip1 Antibody - Product Information

Application	WB, IF, E
Primary Accession	P38936
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	105-140

P21Cip1 Antibody - 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 P21Cip1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 105-140 amino acids from human P21Cip1.

Dilution

WB~~1:1000

IF~~1:10~50

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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

P21Cip1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

P21Cip1 Antibody - 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

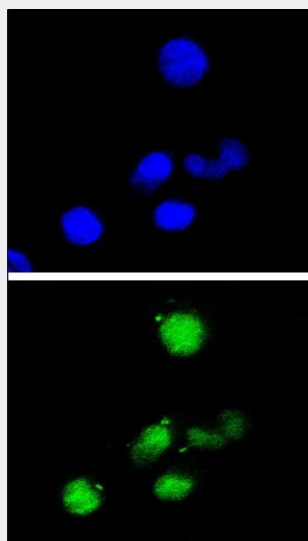
Tissue Location

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

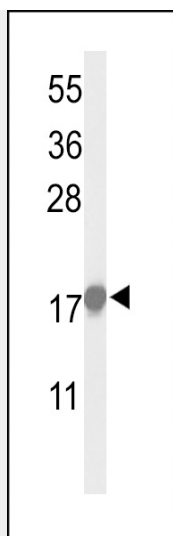
P21Cip1 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

P21Cip1 Antibody - Images

Confocal immunofluorescent analysis of P21 Antibody (WAF1) (Cat. #AP9311a) with HepG2 cell followed by Alexa Fluor® 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).



Western blot analysis of P21Cip1-S130 antibody (Cat. #AP9311a) in HeLa cell line lysates (35ug/lane). P21Cip1 (arrow) was detected using the purified Pab.

P21Cip1 Antibody - Background

This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene 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. Two alternatively spliced variants, which encode an identical protein, have been reported.

P21Cip1 Antibody - References

Scott, S.A., et al., Leuk. Res. 28(12):1293-1301 (2004).
Amini, S., et al., J. Biol. Chem. 279(44):46046-46056 (2004).
Chen, T., et al., Cancer Res. 64(20):7412-7419 (2004).
Sieburg, M., et al., J. Virol. 78(19):10399-10409 (2004).
Giraud, S., et al., Oncogene 23(44):7391-7398 (2004).

P21Cip1 Antibody - Citations

- [Neferine, an alkaloid ingredient in lotus seed embryo, inhibits proliferation of human osteosarcoma cells by promoting p38 MAPK-mediated p21 stabilization.](#)