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Phospho-P21CIP1(S146) Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3188a

Specification

Phospho-P21CIP1(S146) Antibody - Product Information

Application	**WB, IHC-P, DB,E**
Primary Accession	P38936
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

Phospho-P21CIP1(S146) 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 phosphopeptide corresponding to amino acid residues surrounding S146 of human P21CIP1.

Dilution
WB~~1:1000
IHC-P~~1:50~100
DB~~1:500

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
Phospho-P21CIP1(S146) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-P21CIP1(S146) 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).

Cellular Location
Cytoplasm. Nucleus

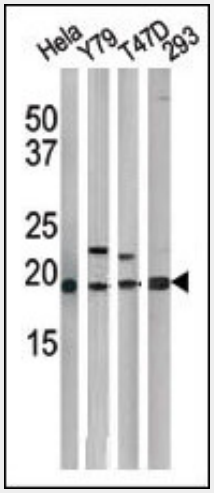
Tissue Location
Expressed in all adult tissues, with 5-fold lower levels observed in the brain

Phospho-P21CIP1(S146) Antibody - Protocols

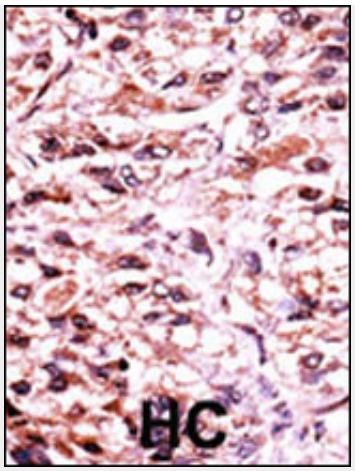
Provided below are standard protocols that you may find useful for product applications.

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

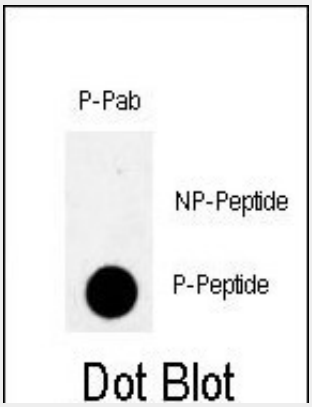
Phospho-P21CIP1(S146) Antibody - Images



The anti-Phospho- P21CIP1-S146 Pab (Cat. #AP3188a) is used in Western blot to detect Phospho-P21CIP1-S146 in, from left to right, Hela, Y79, T47D, and 293 tissue lysates.



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



Dot blot analysis of anti-Phospho- P21CIP1-S146 Antibody (Cat.#AP3188a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Phospho-P21CIP1(S146) 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.

Phospho-P21CIP1(S146) 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).

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Phospho-P21CIP1(S146) Antibody - Citations

- Lats2 phosphorylates p21/CDKN1A after UV irradiation and regulates apoptosis.
- Human NDR kinases control G(1)/S cell cycle transition by directly regulating p21 stability.