

CDKN1A Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13468b

Specification

CDKN1A Antibody (C-term) - Product Information

Application	WB, IF, IHC-P,E
Primary Accession	P38936
Other Accession	NP_000380.1 , NP_510867.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	117-146

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 CDKN1A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 117-146 amino acids from the C-terminal region of human CDKN1A.

Dilution

WB~~1:1000
IF~~1:10~50
IHC-P~~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

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

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

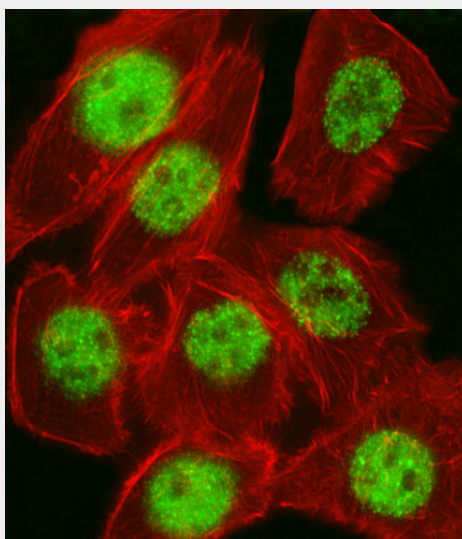
Tissue Location

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

CDKN1A Antibody (C-term) - Protocols

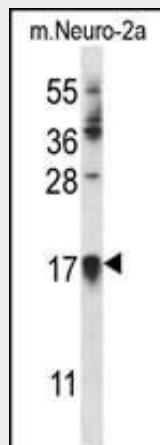
Provided below are standard protocols that you may find useful for product applications.

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

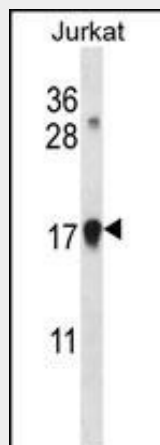
CDKN1A Antibody (C-term) - Images

Fluorescent image of A549 cell stained with CDKN1A Antibody (C-term)(Cat#AP13468b).A549

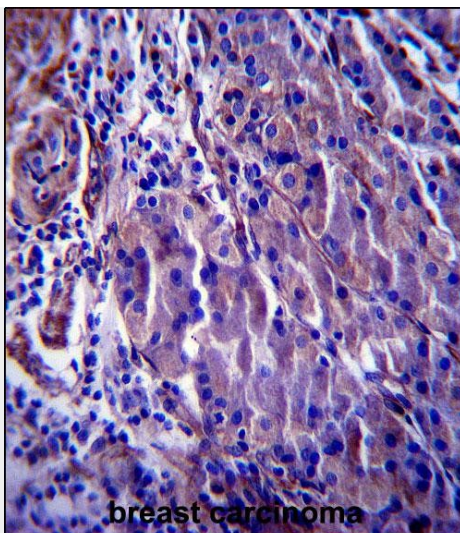
cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with CDKN1A primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7 units/ml, 1 h at 37°C). CDKN1A immunoreactivity is localized to Nucleus significantly.



CDKN1A Antibody (C-term) (Cat. #AP13468b) western blot analysis in mouse Neuro-2a cell line lysates (35 ug/lane). This demonstrates the CDKN1A antibody detected the CDKN1A protein (arrow).



CDKN1A Antibody (C-term) (Cat. #AP13468b) western blot analysis in Jurkat cell line lysates (35 ug/lane). This demonstrates the CDKN1A antibody detected the CDKN1A protein (arrow).



CDKN1A Antibody (C-term) (Cat. #AP13468b) immunohistochemistry analysis in formalin fixed and paraffin embedded human breast carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of CDKN1A Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

CDKN1A Antibody (C-term) - 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. Multiple alternatively spliced variants have been found for this gene.

CDKN1A Antibody (C-term) - References

Hu, F., et al. Oncogene 29(40):5464-5474(2010) Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Jiang, P., et al. Acta Biochim. Biophys. Sin. (Shanghai) 42(9):671-676(2010) Ho-Pun-Cheung, A., et al. Pharmacogenomics J. (2010) In press : Do Nascimento Borges, B., et al. In Vivo 24(4):579-582(2010)