10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CDKN1A Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13468b

Specification

CDKN1A Antibody (C-term) - Product Information

Application	**IF, WB, 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
IF~~1:10~50
WB~~1:1000
IHC-P~~1:10~50

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

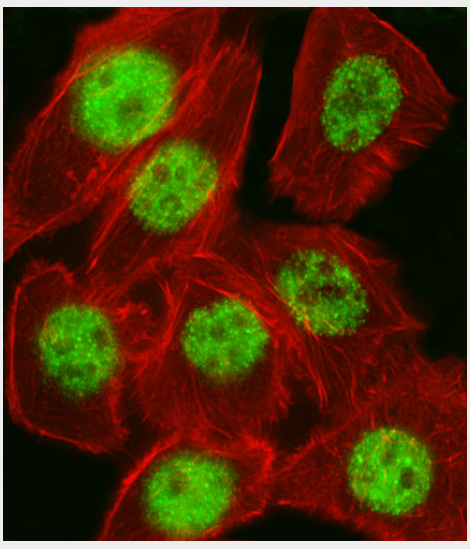
Tissue Location
Expressed in all adult tissues, with 5-fold lower levels observed in the brain

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 Cytomety
- Cell Culture

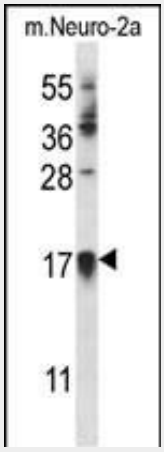
CDKN1A Antibody (C-term) - Images



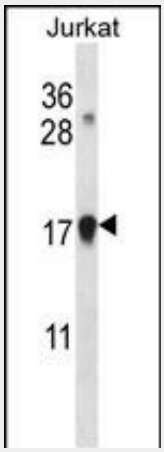
Fluorescent image of A549 cell stained with CDKN1A Antibody (C-term)(Cat#AP13468b).A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with CDKN1A primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

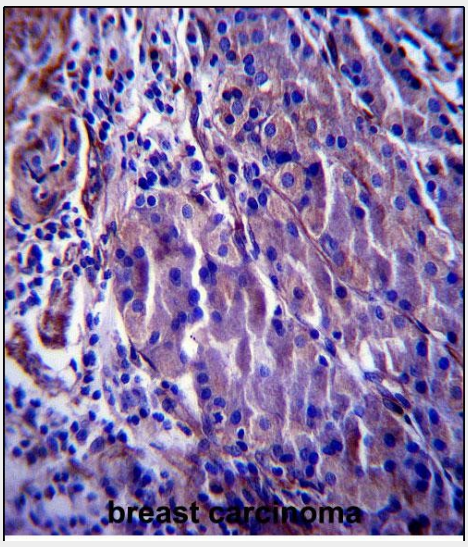
Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃).CDKN1A immunoreactivity is localized to Nucleus significantly.



CDKN1A Antibody (C-term) (Cat. #AP13468b) western blot analysis in mouse Neuro-2a cell line lysates (35ug/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 (35ug/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)