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[KO Validated] CDKN1A/p21CIP1 Rabbit mAb

Catalog No.: A27846 KO Validated Recombinant

Basic Information

Observed MW
21kDa

Calculated MW
18kDa

Category
Primary antibody

Applications
WB,IP,IF/ICC,ELISA

Cross-Reactivity
Human, Mouse

CloneNo number
ARC73214

Background

This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-cyclin-dependent kinase2 or -cyclin-dependent kinase4 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, 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 cyclin-dependent kinase2, and may be instrumental in the execution of apoptosis following caspase activation. Mice that lack this gene have the ability to regenerate damaged or missing tissue. Multiple alternatively spliced variants have been found for this gene.

Recommended Dilutions

WB	1:1000 - 1:5000
IP	0.5μg-4μg antibody for 500μg-700μg extracts of whole cells
IF/ICC	1:100 - 1:400
ELISA	Recommended starting concentration is 1 μg/mL. Please optimize the concentration based on your specific assay requirements.

Immunogen Information

Gene ID
1026

Swiss Prot
P38936

Immunogen
Recombinant protein (or fragment).This information is considered to be commercially sensitive.

Synonyms
P21; CIP1; SDI1; WAF1; CAP20; CDKN1; MDA-6; p21CIP1

Product Information

Source
Rabbit

Isotype
IgG

Purification
Affinity purification

Storage
Store at -20℃. Avoid freeze / thaw cycles.
Buffer: PBS containing 50% glycerol and 0.05% BSA, preserved with proclin300 or sodium azide (as specified on the Certificate of Analysis), pH 7.3.

Contact

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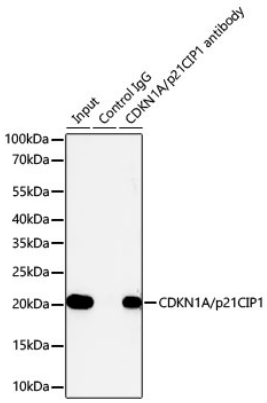
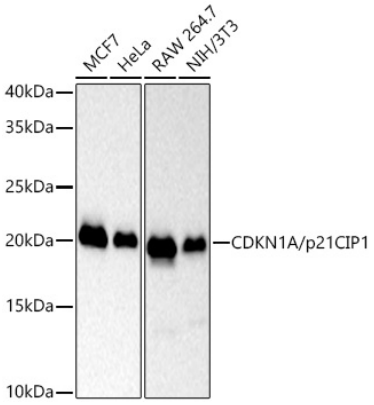
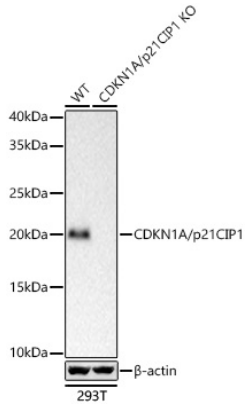
Validation Data



Immunoprecipitation of CDKN1A/p21CIP1 from 600 µg extracts of HT-1080 cells was performed using1 µg of [KO Validated] CDKN1A/p21CIP1 Rabbit mAb (A27846). Rabbit IgG isotype control (AC0005) was used to precipitate the Control IgG sample. IP samples were eluted with 1X reducing Laemmli Buffer. The Input lane represents 10% of the total input. Western blot analysis of immunoprecipitates was conducted using [KO Validated] CDKN1A/p21CIP1 Rabbit mAb (A27846) at a dilution of 1:8000.

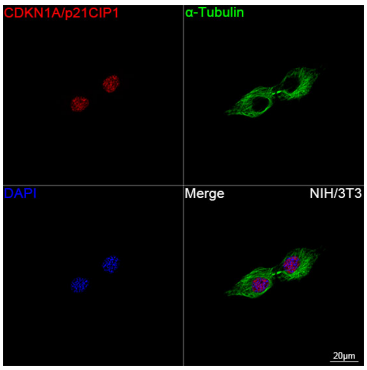


Western blot analysis of various lysates using [KO Validated] CDKN1A/p21CIP1 Rabbit mAb (A27846) at 1:5000 dilution incubated at room temperature for 1.5 hours.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 90s.

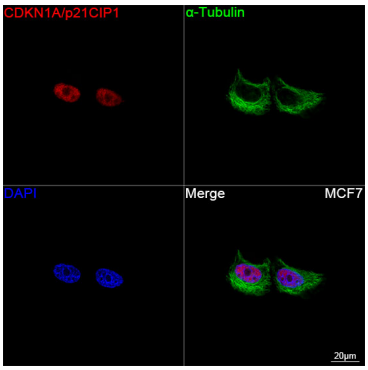


Western blot analysis of lysates from wild type (WT) and CDKN1A/p21CIP1 knockout (KO) 293T cells using [KO Validated] CDKN1A/p21CIP1 Rabbit mAb (A27846) at 1:5000 dilution incubated at room temperature for 1.5 hours.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 90s.

Validation Data



Confocal imaging of NIH/3T3 cells using [KO Validated] CDKN1A/p21CIP1 Rabbit mAb (A27846, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). The cells were counterstained with α-Tubulin Mouse mAb (AC012, dilution 1:400) followed by incubation with ABflo® 488-conjugated Goat Anti-Mouse IgG (H+L) Ab (AS076, dilution 1:500) (Green). DAPI was used for nuclear staining (Blue). Objective: 100x.



Confocal imaging of MCF7 cells using [KO Validated] CDKN1A/p21CIP1 Rabbit mAb (A27846, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). The cells were counterstained with α-Tubulin Mouse mAb (AC012, dilution 1:400) followed by incubation with ABflo® 488-conjugated Goat Anti-Mouse IgG (H+L) Ab (AS076, dilution 1:500) (Green). DAPI was used for nuclear staining (Blue). Objective: 100x.