

# CDKN2AIP (S-13): sc-161478

## BACKGROUND

Cell cycle progression is controlled in part by a family of cyclin proteins and cyclin dependent kinases (Cdk). CDKN2AIP (CDKN2A-interacting protein), also known as CARF, is a 580 amino acid protein that activates p53 via p14 ARF (alternate reading frame)-dependent and independent pathways. CDKN2AIP-dependent activation of p53, a protein that up-regulates growth arrest and apoptosis-related genes in response to stress signals, leads to an enhancement of p53 function. Expression levels of CDKN2AIP and p53 show an inverse relationship that is caused by a negative-feedback control via a proteasome-mediated degradation pathway. CDKN2AIP is expressed ubiquitously across tissue samples and, along with p14 ARF, is localized to the perinucleolar region within the nucleus. Through direct interaction with MDM2, CDKN2AIP functions as a repressor of MDM2 transcription and undergoes degradation by the MDM2-dependent proteasome pathway. CDKN2AIP contains one DRBM (double-stranded RNA-binding) domain, suggesting a possible role in post-transcriptional gene regulation.

## REFERENCES

- Hasan, M.K., et al. 2002. CARF is a novel protein that cooperates with mouse p19ARF (human p14ARF) in activating p53. *J. Biol. Chem.* 277: 37765-37770.
- Hasan, M.K., et al. 2004. Alternative reading frame protein (ARF)-independent function of CARF (collaborator of ARF) involves its interactions with p53: evidence for a novel p53-activation pathway and its negative feedback control. *Biochem. J.* 380: 605-610.
- Kaul, S.C., et al. 2006. CARF regulates p19ARF-p53-p21WAF1 senescence pathway by multiple checkpoints. *Ann. N.Y. Acad. Sci.* 1067: 217-219.
- Kamrul, H.M., et al. 2007. CARF binds to three members (ARF, p53, and HDM2) of the p53 tumor-suppressor pathway. *Ann. N.Y. Acad. Sci.* 1100: 312-315.
- Hasan, M.K., et al. 2008. CARF (collaborator of ARF) interacts with HDM2: evidence for a novel regulatory feedback regulation of CARF-p53-HDM2-p21<sup>WAF1</sup> pathway. *Int. J. Oncol.* 32: 663-671.

## CHROMOSOMAL LOCATION

Genetic locus: CDKN2AIP (human) mapping to 4q35.1; Cdkn2aip (mouse) mapping to 8 B1.1.

## SOURCE

CDKN2AIP (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CDKN2AIP of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161478 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CDKN2AIP (S-13) is recommended for detection of CDKN2AIP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CDKN2AIP siRNA (h): sc-88879, CDKN2AIP siRNA (m): sc-142231, CDKN2AIP shRNA Plasmid (h): sc-88879-SH, CDKN2AIP shRNA Plasmid (m): sc-142231-SH, CDKN2AIP shRNA (h) Lentiviral Particles: sc-88879-V and CDKN2AIP shRNA (m) Lentiviral Particles: sc-142231-V.

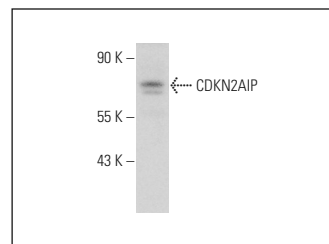
Molecular Weight of CDKN2AIP: 61 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CDKN2AIP (S-13): sc-161478. Western blot analysis of CDKN2AIP expression in HeLa nuclear extract.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.