

# p21 Waf1/Cip1 (B-2): sc-271532

## BACKGROUND

It is now well established that cyclins play a positive role in promoting cell cycle transitions via their ability to associate with and activate their cognate cyclin-dependent kinases (Cdks). Cdk2 associates with cyclins A, D and E, and has been implicated in the control of the G<sub>1</sub> to S phase transition in mammals. A novel Cdk-interacting protein, designated p21 Waf1/Cip1, Cip1 or WAF1, has been identified in cyclin A, cyclin D1, cyclin E and Cdk2 immunoprecipitates. p21 Waf1/Cip1 is a potent, tight-binding inhibitor of Cdks and can inhibit the phosphorylation of Rb by cyclin A-Cdk 2, cyclin E-Cdk2, cyclin D1-Cdk4 and cyclin D2-Cdk4 complexes. Expression of p21 Waf1/Cip1 is inducible by wildtype, but not mutant, p53. The mouse homolog of p21 Waf1/Cip1 is designated CAP20.

## CHROMOSOMAL LOCATION

Genetic locus: CDKN1A (human) mapping to 6p21.2; Cdkn1a (mouse) mapping to 17 A3.3.

## SOURCE

p21 Waf1/Cip1 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 124-164 at the C-terminus of p21 Waf1/Cip1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p21 Waf1/Cip1 (B-2) is available conjugated to agarose (sc-271532 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271532 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271532 PE), fluorescein (sc-271532 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271532 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271532 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271532 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271532 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271532 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271532 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271532 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

p21 Waf1/Cip1 (B-2) is recommended for detection of p21 Waf1/Cip1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

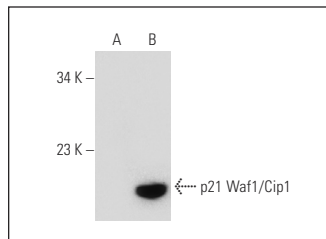
Suitable for use as control antibody for p21 Waf1/Cip1 siRNA (h): sc-29427, p21 Waf1/Cip1 siRNA (m): sc-29428, p21 Waf1/Cip1 shRNA Plasmid (h): sc-29427-SH, p21 Waf1/Cip1 shRNA Plasmid (m): sc-29428-SH, p21 Waf1/Cip1 shRNA (h) Lentiviral Particles: sc-29427-V and p21 Waf1/Cip1 shRNA (m) Lentiviral Particles: sc-29428-V.

Molecular Weight of p21 Waf1/Cip1: 21 kDa.

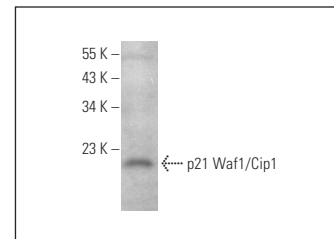
## STORAGE

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

## DATA



p21 Waf1/Cip1 (B-2): sc-271532. Western blot analysis of p21 Waf1/Cip1 expression in non-transfected: sc-117752 (A) and mouse p21 Waf1/Cip1 transfected: sc-122305 (B) 293T whole cell lysates.



p21 Waf1/Cip1 (B-2): sc-271532. Western blot analysis of p21 Waf1/Cip1 expression in HUV-EC-C whole cell lysate.

## SELECT PRODUCT CITATIONS

- Vidakovic, M., et al. 2005. Co-localization of PARP-1 and lamin B in the nuclear architecture: a halo-fluorescence- and confocal-microscopy study. *J. Cell. Biochem.* 96: 555-568.
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- Xu, B., et al. 2018. Effects of harmaline on cell growth of human liver cancer through the p53/p21 and Fas/FasL signaling pathways. *Oncol Lett.* 15: 1931-1936.
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## RESEARCH USE

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

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