

# p21 Waf1/Cip1 (SX118): sc-53870

## 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 (SX118) is a mouse monoclonal antibody raised against amino acids 146-164 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 (SX118) is available conjugated to agarose (sc-53870 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53870 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53870 PE), fluorescein (sc-53870 FITC), Alexa Fluor® 488 (sc-53870 AF488), Alexa Fluor® 546 (sc-53870 AF546), Alexa Fluor® 594 (sc-53870 AF594) or Alexa Fluor® 647 (sc-53870 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53870 AF680) or Alexa Fluor® 790 (sc-53870 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

p21 Waf1/Cip1 (SX118) is recommended for detection of p21 Waf1/Cip1 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for p21 Waf1/Cip1 siRNA (h): sc-29427, p21 Waf1/Cip1 siRNA (m): sc-29428, p21 Waf1/Cip1 siRNA (r): sc-108036, p21 Waf1/Cip1 shRNA Plasmid (h): sc-29427-SH, p21 Waf1/Cip1 shRNA Plasmid (m): sc-29428-SH, p21 Waf1/Cip1 shRNA Plasmid (r): sc-108036-SH, p21 Waf1/Cip1 shRNA (h) Lentiviral Particles: sc-29427-V, p21 Waf1/Cip1 shRNA (m) Lentiviral Particles: sc-29428-V and p21 Waf1/Cip1 shRNA (r) Lentiviral Particles: sc-108036-V.

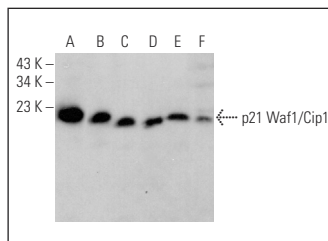
Molecular Weight of p21 Waf1/Cip1: 21 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, SW480 cell lysate: sc-2219 or T-47D cell lysate: sc-2293.

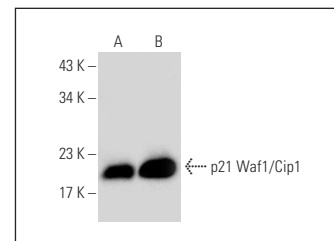
## STORAGE

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 (SX118): sc-53870. Western blot analysis of p21 Waf1/Cip1 expression in T-47D (A), SW480 (B), c4 (C), EOC 20 (D) and C6 (E) whole cell lysates and KNRK nuclear extract (F).



p21 Waf1/Cip1 (SX118): sc-53870. Western blot analysis of p21 Waf1/Cip1 expression in untreated (A) and Sodium phenylbutyrate (sc-200652) treated (B) Hep G2 whole cell lysates. Note upregulation of p21 Waf1/Cip1 expression in lane B.

## SELECT PRODUCT CITATIONS

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- Datta, N., et al. 2019. Promyelocytic leukemia (PML) gene regulation: implication towards curbing oncogenesis. *Cell Death Dis.* 10: 656.
- Liu, S., et al. 2020. Interleukin 16 contributes to gammaherpesvirus pathogenesis by inhibiting viral reactivation. *PLoS Pathog.* 16: e1008701.
- Woodfield, S.E., et al. 2021. MDM4 inhibition: a novel therapeutic strategy to reactivate p53 in hepatoblastoma. *Sci. Rep.* 11: 2967.

## RESEARCH USE

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