**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 G1 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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

p21 Waf1/Cip1 (187) is a mouse monoclonal antibody produced by immunization with full length p21 Waf1/Cip1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG; kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-817 X, 200 µg/0.1 ml.

p21 Waf1/Cip1 (187) is available conjugated to agarose (sc-817 AC), 500 µg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-817 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycocerythrin (sc-817 PE), fluorescein (sc-817 FITC), Alexa Fluor® 488 (sc-817 AF488), Alexa Fluor® 546 (sc-817 AF546), Alexa Fluor® 594 (sc-817 AF594) or Alexa Fluor® 647 (sc-817 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-817 AF680) or Alexa Fluor® 790 (sc-817 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**STORAGE**

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

**APPLICATIONS**

p21 Waf1/Cip1 (187) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


p21 Waf1/Cip1 (187) X TransCruz antibody is recommended for ChIP assays. Molecular Weight of p21 Waf1/Cip1: 21 KDa.

Positive Controls: C32 nuclear extract: sc-2136, MCF7 whole cell lysate: sc-2206 or HeLa nuclear extract: sc-2120.

**DATA**

Western blot analysis of p21 Waf1/Cip1 expression in untreated (A, C, E) and photoinduced (B, D, F) C32 nuclear extracts. Antibodies tested include p21 Waf1/Cip1 (187): sc-817 (A, B), p21 (1-19): sc-397 (C, D) and p21 (C-19): sc-397 (E, F).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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