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, CIP1 or WAF1, has been identified in cyclin A, cyclin D1, cyclin E and Cdk2 immunoprecipitates. p21 is a potent, tight-binding inhibitor of Cdks and can inhibit the phosphorylation of Rb by cyclin A-Cdk2, cyclin E-Cdk2, cyclin D1-Cdk4 and cyclin D2-Cdk4 complexes. Expression of CIP1, also designated WAF1, is inducible by wild-type, but not mutant, p53. The mouse homolog of p21 is designated CAP20.

CHROMOSOMAL LOCATION

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

SOURCE

p21 (M-19) is available as either rabbit (sc-471) or goat (sc-471-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of p21 of mouse 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-471 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p21 (M-19) is recommended for detection of p21 of mouse, rat and, to a lesser extent, 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).

p21 (M-19) is also recommended for detection of p21 in additional species, including canine, porcine and feline.


Molecular Weight of p21: 21 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, p21 (m): 293T Lysate: sc-122305 or KNK nuclear extract: sc-2141.

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.

DATA

SELECT PRODUCT CITATIONS


Try p21 (F-5): sc-6246 or p21 (F-8): sc-271610, our highly recommended monoclonal alternatives to p21 (M-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see p21 (F-5): sc-6246.