SANTA CRUZ BIOTECHNOLOGY, INC.

p21 Waf1/Cip1 (m): 293T Lysate: sc-122305

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_1 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

1. Sherr, C.J. 1993. Mammalian G_1 cyclins. Cell 73: 1059-1065.
2. Harper, J.W., et al. 1993. The p21 Cdk-interacting protein Cip1 is a potent inhibitor of G_1 cyclin-dependent kinases. Cell 75: 805-816.
3. El-Deiry, W.S., et al. 1993. WAF1, a potential mediator of p53 tumor suppression. Cell 75: 817-825.
4. Hunter, T. 1993. Braking the cycle. Cell 75: 839-841.
5. Kato, J., et al. 1993. Direct binding of cyclin D to the retinoblastoma gene product and pRb phosphorylation by the cyclin D-dependent kinase Cdk4. Genes Dev. 7: 331-342.
6. Xiong, Y., et al. 1993. p21 is a universal inhibitor of cyclin kinases. Nature 366: 701-704.
7. Gu, Y., et al. 1993. Inhibition of Cdk2 activity *in vivo* by an associated 20 kDa regulatory subunit. Nature 366: 707-710.
8. El-Deiry, W.S., et al. 1994. WAF1/Cip1 is induced in p53-mediated G_1 arrest and apoptosis. Cancer Res. 54: 1169-1174.

CHROMOSOMAL LOCATION

Genetic locus: Cdkn1a (mouse) mapping to 17 A3.3.

PRODUCT

p21 Waf1/Cip1 (m): 293T Lysate represents a lysate of mouse p21 Waf1/Cip1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

p21 Waf1/Cip1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive p21 Waf1/Cip1 antibodies. Recommended use: 10-20 µl per lane.

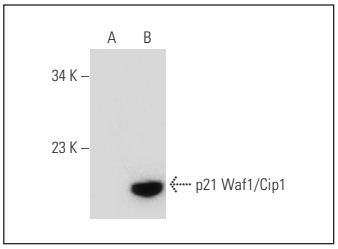
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

p21 Waf1/Cip1 (B-2): sc-271532 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse p21 Waf1/Cip1 expression in p21 Waf1/Cip1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

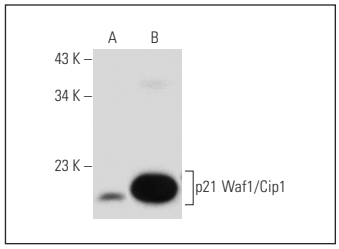
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

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 (F-8): sc-271610. 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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.