SANTA CRUZ BIOTECHNOLOGY, INC.

P15RS (F-3): sc-515588

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The normal progression of cells through the cell cycle is under the control of the cyclin dependent protein kinases (Cdks), which are subject to inhibition by the mitotic inhibitory INK4 family. p15 is a member of the INK4 family and acts as a cyclin dependent kinase inhibitor to prevent Cdk kinase activation. P15RS (cyclin dependent kinase 2B-inhibitor-related protein), a 213 amino acid protein that contains an RPR domain, is involved in the regulation of nuclear pre-mRNA, which suggests that P15RS acts as a negative regulator of the G_1 phase of the cell cycle. The expression of P15RS is unregulated in cells that overexpress p15, further suggesting a role for P15RS in cell cycle regulation. The gene that encodes P15RS is located on chromosome 18q12.2.

REFERENCES

1. Quesnel, B., et al. 1998. Methylation of the $p15^{INK4b}$ gene in myelodysplastic syndromes is frequent and acquired during disease progression. Blood 91: 2985-2990.
2. Staller, P., et al. 2001. Repression of $p15^{INK4b}$ expression by Myc through association with Miz-1. Nat. Cell Biol. 3: 392-399.
3. Liu, J., et al. 2002. Identification and characterization of P15RS, a novel $P15^{INK4b}$ related gene on G_1/S progression. Biochem. Biophys. Res. Commun. 299: 880-885.
4. Tanaka,T.S., et al. 2002. Gene expression profiling of embryo-derived stem cells reveals candidate genes associated with pluripotency and lineage specificity. Genome Res. 12: 1921-1928.
5. Daskalakis, M., et al. 2002. Demethylation of a hypermethylated $P15^{INK4B}$ gene in patients with myelodysplastic syndrome by 5-Aza-2'-deoxycytidine (decitabine) treatment. Blood 100: 2957-2964.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610347. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: RPRD1A (human) mapping to 18q12.2; Rprd1a (mouse) mapping to 18 A2.

SOURCE

P15RS (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 152-170 within an internal region of P15RS of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515588 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

P15RS (F-3) is recommended for detection of P15RS 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 P15RS siRNA (h): sc-76024, P15RS siRNA (m): sc-141521, P15RS shRNA Plasmid (h): sc-76024-SH, P15RS shRNA Plasmid (m): sc-141521-SH, P15RS shRNA (h) Lentiviral Particles: sc-76024-V and P15RS shRNA (m) Lentiviral Particles: sc-141521-V.

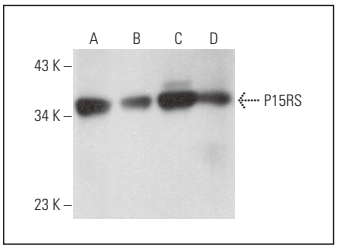
Molecular Weight of P15RS: 36 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, human liver extract: sc-363766 or U-251-MG whole cell lysate: sc-364176.

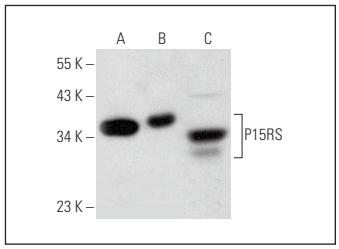
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



P15RS (F-3): sc-515588. Western blot analysis of P15RS expression in Jurkat (**A**), Neuro-2A (**B**) and PC-12 (**C**) whole cell lysates and rat heart tissue extract (**D**).



P15RS (F-3): sc-515588. Western blot analysis of P15RS expression in Jurkat (**A**) and U-251-MG (**B**) whole cell lysates and human liver tissue extract (**C**).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.