

PRL-1 (h): 293 Lysate: sc-176602

BACKGROUND

Protein tyrosine phosphatases (PTPs) play a role in regulating diverse cellular processes. They form a small class of prenylated protein phosphatases called PRL proteins characterized by a C-terminal consensus sequence for prenylation. PRL-1, also designated protein tyrosine phosphatase type IVA protein 1 (PTP4A1), is a unique nuclear PTP that is induced in regenerating liver and mitogen-stimulated cells. It is primarily expressed in spleen, bone marrow, thymus, lymph nodes, T lymphocytes and tonsil and is overexpressed in tumor cell lines. PRL-2 (protein tyrosine phosphatase type IVA protein 2, or PTP4A2) is ubiquitously expressed with highest levels in heart, skeletal muscle and thymus but is also overexpressed in prostate tumor tissue. PRL-2 stimulates progression from G₁ into S phase during mitosis and promotes tumors. PRL-3, also known as protein tyrosine phosphatase type IVA, member 3 (PTP4A3) is expressed in heart and skeletal muscle as well as epithelial cells of the small intestine and associates with the cell plasma membrane. Over expression of PRL-3 inhibits Angiotensin-II induced cell calcium mobilization and promotes cell growth. PRL-3 is important for colorectal cancer metastasis and may serve as a new therapeutic target for this condition.

REFERENCES

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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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: PTP4A1 (human) mapping to 6q12.

PRODUCT

PRL-1 (h): 293 Lysate represents a lysate of human PRL-1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PRL-1 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive PRL-1 antibodies. Recommended use: 10-20 µl per lane.

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

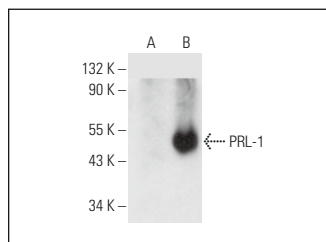
PRL-1/2/3 (D-6): sc-271879 is recommended as a positive control antibody for Western Blot analysis of enhanced human PRL-1 expression in PRL-1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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



PRL-1/2/3 (D-6): sc-271879. Western blot analysis of PRL-1 expression in non-transfected: sc-110760 (A) and human PRL-1 transfected: sc-176602 (B) 293 whole cell lysates.

RESEARCH USE

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