



# SZABO SCANDIC

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Diagnostik & molekulare Diagnostik



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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# 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 is stimulates progression from G<sub>1</sub> 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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- Zeng, Q., Hong, W. and Tan, Y.H. 1998. Mouse PRL-2 and PRL-3, two potentially prenylated protein tyrosine phosphatases homologous to PRL-1. *Biochem. Biophys. Res. Commun.* 244: 421-427.
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- Jeong, D.G., Kim, S.J., Kim, J.H., Son, J.H., Park, M.R., Lim, S.M., Yoon, T.S. and Ryu, S.E. 2005. Trimeric structure of PRL-1 phosphatase reveals an active enzyme conformation and regulation mechanisms. *J. Mol. Biol.* 345: 401-413.

## 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](http://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.

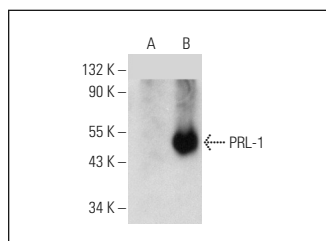
Control 293 Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

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.