

# PRX1 (L-13)-R: sc-21947-R

## BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. PRX1 (paired related homeobox 1), also known as PRRX1, PMX1 or PHOX1, is a 245 amino acid protein that contains one OAR domain and one homeobox DNA-binding domain and belongs to the paired homeobox family. Localized to the nucleus, PRX1 functions as a transcriptional co-activator that enhances the DNA-binding activity of serum response factor (SRF), thereby mediating the induction of SRF-dependent gene expression by growth and differentiation factors. Additionally, PRX1 regulates the transcriptional activities of creatine kinase-M (muscle), thereby playing a role in the establishment of mesodermal muscle types. PRX1 exists as two alternatively spliced isoforms, designated PMX1-A and PMX1-B.

## REFERENCES

1. Grueneberg, D.A., et al. 1992. Human and *Drosophila* homeodomain proteins that enhance the DNA-binding activity of serum response factor. *Science* 257: 1089-1095.
2. Nakamura, T., et al. 1999. Nup98 is fused to PMX1 homeobox gene in human acute myelogenous leukemia with chromosome translocation t(1;11)(q23;p15). *Blood* 94: 741-747.
3. Norris, R.A., et al. 2000. Human PRRX1 and PRRX2 genes: cloning, expression, genomic localization, and exclusion as disease genes for Nager syndrome. *Mamm. Genome* 11: 1000-1005.
4. Jones, F.S., et al. 2001. PRX1 controls vascular smooth muscle cell proliferation and Tenascin-C expression and is upregulated with PRX2 in pulmonary vascular disease. *Circ. Res.* 89: 131-138.
5. Kim, Y.J., et al. 2007. Human PRX1 gene is a target of Nrf2 and is upregulated by hypoxia/reoxygenation: implication to tumor biology. *Cancer Res.* 67: 546-554.

## CHROMOSOMAL LOCATION

Genetic locus: PRRX1 (human) mapping to 1q24.2; Prrx1 (mouse) mapping to 1 H2.1.

## SOURCE

PRX1 (L-13)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping of PRX1 of human 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-21947 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

PRX1 (L-13)-R is recommended for detection of PRX1 of mouse, rat and 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).

PRX1 (L-13)-R is also recommended for detection of PRX1 in additional species, including equine, canine, bovine and porcine.

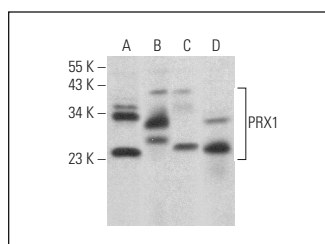
Suitable for use as control antibody for PRX1 siRNA (h): sc-106455, PRX1 siRNA (m): sc-152531, PRX1 shRNA Plasmid (h): sc-106455-SH, PRX1 shRNA Plasmid (m): sc-152531-SH, PRX1 shRNA (h) Lentiviral Particles: sc-106455-V and PRX1 shRNA (m) Lentiviral Particles: sc-152531-V.

Positive Controls: mouse testis extract: sc-2405, SP2/0 whole cell lysate: sc-364795 or NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PRX1 (L-13)-R: sc-21947-R. Western blot analysis of PRX1 expression in NIH/3T3 (A), NTERA-2 cl.D1 (B) and SP2/0 (C) whole cell lysates and mouse testis tissue extract (D).

## RESEARCH USE

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

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