

PLRG1 (N-17): sc-74844

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. PLRG1 (pleiotropic regulator 1), also known as PRL1, is a 514 amino acid protein that localizes to nuclear speckles and contains 7 WD repeats. Existing as a component of the multiprotein Cdc5L complex, PLRG1 plays an essential role in spliceosome assembly and subsequent pre-mRNA splicing.

REFERENCES

1. Neer, E.J., et al. 1994. The ancient regulatory-protein family of WD-repeat proteins. *Nature* 371: 297-300.
2. Németh, K., et al. 1998. Pleiotropic control of glucose and hormone responses by PRL1, a nuclear WD protein, in *Arabidopsis*. *Genes Dev.* 12: 3059-3073.
3. Smith, T.F., et al. 1999. The WD repeat: a common architecture for diverse functions. *Trends Biochem. Sci.* 24: 181-185.
4. Ajuh, P., et al. 2000. Functional analysis of the human Cdc5L complex and identification of its components by mass spectrometry. *EMBO J.* 19: 6569-6581.
5. Ajuh, P., et al. 2001. A direct interaction between the carboxyl-terminal region of Cdc5L and the WD40 domain of PLRG1 is essential for pre-mRNA splicing. *J. Biol. Chem.* 276: 42370-42381.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605961. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Rappsilber, J., et al. 2002. Large-scale proteomic analysis of the human spliceosome. *Genome Res.* 12: 1231-1245.

CHROMOSOMAL LOCATION

Genetic locus: PLRG1 (human) mapping to 4q31.3; Plrg1 (mouse) mapping to 3 E3.

SOURCE

PLRG1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PLRG1 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-74844 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PLRG1 (N-17) is recommended for detection of PLRG1 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).

PLRG1 (N-17) is also recommended for detection of PLRG1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PLRG1 siRNA (h): sc-76170, PLRG1 siRNA (m): sc-76171, PLRG1 shRNA Plasmid (h): sc-76170-SH, PLRG1 shRNA Plasmid (m): sc-76171-SH, PLRG1 shRNA (h) Lentiviral Particles: sc-76170-V and PLRG1 shRNA (m) Lentiviral Particles: sc-76171-V.

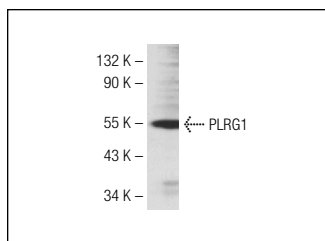
Molecular Weight of PLRG1: 54 kDa.

Positive Controls: K-562 nuclear extract: sc-2130.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PLRG1 (N-17): sc-74844. Western blot analysis of PLRG1 expression in K-562 nuclear extract.

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 or our catalog for detailed protocols and support products.