

periphilin 1 (L-14): sc-163224

BACKGROUND

Periphilin 1, also known as PPHLN1 or gastric cancer antigen Ga50, is a 458 amino acid protein that interacts with periplakin, a known precursor of the cornified cell envelope. A homodimer, periphilin 1 is involved in epithelial differentiation and contributes to epidermal integrity and barrier formation. Periphilin 1 is ubiquitously expressed and localizes to nucleus and cytoplasm. Existing as eight alternatively spliced isoforms, periphilin 1 is highly insoluble and contains a putative nuclear localization signal (NLS) within its N-terminal half, a prerequisite for the formation of insoluble complexes. The N-terminal portion of periphilin 1 is followed by a possible caspase recognition sequence and the C-terminal half contains a potential nuclear export signal, which is composed of heptad repeats that form four putative α helices, and shares structural homology with the homodimerization domain of vitellogenin proteins. Periphilin 1 is encoded by a gene that maps to human chromosome 12q12.

REFERENCES

- Lin, A., et al. 2002. Serological identification and expression analysis of gastric cancer-associated genes. *Br. J. Cancer* 86: 1824-1830.
- Kazerounian, S. and Aho, S. 2003. Characterization of periphilin, a widespread, highly insoluble nuclear protein and potential constituent of the keratinocyte cornified envelope. *J. Biol. Chem.* 278: 36707-36717.
- Kurita, M., et al. 2004. Overexpression of CR/periphilin downregulates Cdc7 expression and induces S-phase arrest. *Biochem. Biophys. Res. Commun.* 324: 554-561.
- Reis, E.M., et al. 2004. Antisense intronic non-coding RNA levels correlate to the degree of tumor differentiation in prostate cancer. *Oncogene* 23: 6684-6692.
- Mizrachi-Koren, M., et al. 2005. Identification of a novel locus associated with congenital recessive ichthyosis on 12p11.2-q13. *J. Invest. Dermatol.* 125: 456-462.
- Huh, J.W., et al. 2006. Molecular evolution of the periphilin gene in relation to human endogenous retrovirus m element. *J. Mol. Evol.* 62: 730-737.
- Failla, P., et al. 2008. 12q12 deletion: a new patient contributing to genotype-phenotype correlation. *Am. J. Med. Genet. A* 146A: 1354-1357.
- Soehn, A.S., et al. 2009. Periphilin is strongly expressed in the murine nervous system and is indispensable for murine development. *Genesis* 47: 697-707.
- Adam, M.P., et al. 2010. A family with a 1.17 Mb deletion of 12q12: refining genotype-phenotype correlation. *Am. J. Med. Genet. A* 152A: 2394-2398.

CHROMOSOMAL LOCATION

Genetic locus: PPHLN1 (human) mapping to 12q12; Pphln1 (mouse) mapping to 15 E3.

RESEARCH USE

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

SOURCE

periphilin 1 (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of periphilin 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163224 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

periphilin 1 (L-14) is recommended for detection of periphilin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

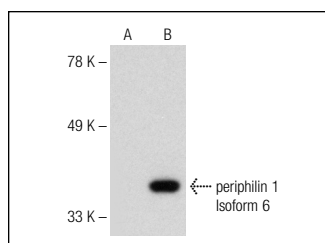
Suitable for use as control antibody for periphilin 1 siRNA (h): sc-95892, periphilin 1 siRNA (m): sc-152169, periphilin 1 shRNA Plasmid (h): sc-95892-SH, periphilin 1 shRNA Plasmid (m): sc-152169-SH, periphilin 1 shRNA (h) Lentiviral Particles: sc-95892-V and periphilin 1 shRNA (m) Lentiviral Particles: sc-152169-V.

Molecular Weight of periphilin 1 isoforms 1/2/3/4: 53/43/50/30 kDa.

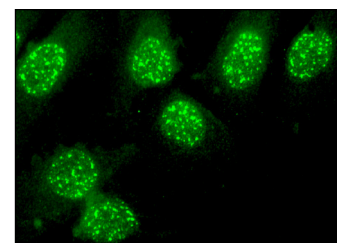
Molecular Weight of periphilin 1 isoforms 5/6/7: 37/13/42 kDa.

Positive Controls: periphilin 1 (m): 293T Lysate: sc-122491.

DATA



periphilin 1 (L-14): sc-163224. Western blot analysis of periphilin 1 expression in non-transfected: sc-117752 (A) and mouse periphilin 1 transfected: sc-122491 (B) 293T whole cell lysates.



periphilin 1 (L-14): sc-163224. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

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.