



LARP1 (P-12): sc-131974

BACKGROUND

La-related protein 1 (LARP1), also known as KIAA0731, is a 1,096 amino acid protein belonging to the LARP family. LARP1 contains two conserved regions, one that shares homology with La/SSB proteins and one that is conserved only across LARP family proteins. Within the La/SSB conserved region, LARP1 contains a HTH La-type RNA-binding domain, which may indicate a role in RNA stabilization and folding. Upon DNA damage, LARP1 is phosphorylated by ATR or ATM. LARP1 interacts with many signaling intermediate proteins, including 14-3-3 β , 14-3-3 γ , 14-3-3 θ and 14-3-3 ω . Widely expressed, LARP1 levels are highest in heart. LARP1 exists as three isoforms produced by alternative splicing.

REFERENCES

- Nagase, T., Ishikawa, K., Suyama, M., Kikuno, R., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
- Chauvet, S., Maurel-Zaffran, C., Miassod, R., Jullien, N., Pradel, J. and Aragnol, D. 2000. *dlarp*, a new candidate Hox target in *Drosophila* whose orthologue in mouse is expressed at sites of epithelium/mesenchymal interactions. Dev. Dyn. 218: 401-413.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 612059. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Jin, J., Smith, F.D., Stark, C., Wells, C.D., Fawcett, J.P., Kulkarni, S., Metalnikov, P., O'Donnell, P., Taylor, P., Taylor, L., Zougman, A., Woodgett, J.R., Langeberg, L.K., Scott, J.D. and Pawson, T. 2004. Proteomic, functional, and domain-based analysis of *in vivo* 14-3-3 binding proteins involved in cytoskeletal regulation and cellular organization. Curr. Biol. 14: 1436-1450.
- Horke, S., Reumann, K., Schweizer, M., Will, H. and Heise, T. 2004. Nuclear trafficking of La protein depends on a newly identified nucleolar localization signal and the ability to bind RNA. J. Biol. Chem. 279: 26563-26570.
- Beausoleil, S.A., Jedrychowski, M., Schwartz, D., Elias, J.E., Villén, J., Li, J., Cohn, M.A., Cantley, L.C. and Gygi, S.P. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. Proc. Natl. Acad. Sci. USA 101: 12130-12135.
- Matsuoka, S., Ballif, B.A., Smogorzewska, A., McDonald, E.R., Hurov, K.E., Luo, J., Bakalarski, C.E., Zhao, Z., Solimini, N., Lerenthal, Y., Shiloh, Y., Gygi, S.P. and Elledge, S.J. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: LARP1 (human) mapping to 5q33.2; Larp1 (mouse) mapping to 11 B2.

STORAGE

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

SOURCE

LARP1 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LARP1 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-131974 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LARP1 (P-12) is recommended for detection of LARP1 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other LARP family members .

Suitable for use as control antibody for LARP1 siRNA (h): sc-91848, LARP1 siRNA (m): sc-146649, LARP1 shRNA Plasmid (h): sc-91848-SH, LARP1 shRNA Plasmid (m): sc-146649-SH, LARP1 shRNA (h) Lentiviral Particles: sc-91848-V and LARP1 shRNA (m) Lentiviral Particles: sc-146649-V.

Molecular Weight of LARP1: 123 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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