

LARP7 (E-5): sc-515209

BACKGROUND

LARP7 (La ribonucleoprotein domain family, member 7), also known as PIP7S or HDCMA18P, is a 582 amino acid protein that localizes to the nucleoplasm and contains one RRM domain and one HTH La-type RNA-binding domain. Expressed as two alternatively spliced isoforms, LARP7 functions as an integral part of the 7SK RNP complex and binds to the highly conserved 3'-terminal U-rich stretch of 7SK RNA, effectively sequestering positive elongation factors and repressing transcription of Pol II genes. Via its ability to control transcription and elongation, LARP7 is thought to be involved in cell growth and tumorigenesis. LARP7 is subject to DNA damage-dependent phosphorylation, probably by ATM or ATR.

REFERENCES

- Markert, A., et al. 2008. The La-related protein LARP7 is a component of the 7SK ribonucleoprotein and affects transcription of cellular and viral polymerase II genes. *EMBO Rep.* 9: 569-575.
- Biewenga, P., et al. 2008. Gene expression in early stage cervical cancer. *Gynecol. Oncol.* 108: 520-526.
- He, N., et al. 2008. A La-related protein modulates 7SK snRNP integrity to suppress P-TEFb-dependent transcriptional elongation and tumorigenesis. *Mol. Cell* 29: 588-599.
- Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612026. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: LARP7 (human) mapping to 4q25; Larp7 (mouse) mapping to 3 G2.

SOURCE

LARP7 (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 517-535 near the C-terminus of LARP7 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LARP7 (E-5) is available conjugated to agarose (sc-515209 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515209 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515209 PE), fluorescein (sc-515209 FITC), Alexa Fluor® 488 (sc-515209 AF488), Alexa Fluor® 546 (sc-515209 AF546), Alexa Fluor® 594 (sc-515209 AF594) or Alexa Fluor® 647 (sc-515209 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515209 AF680) or Alexa Fluor® 790 (sc-515209 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515209 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

LARP7 (E-5) is recommended for detection of LARP7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

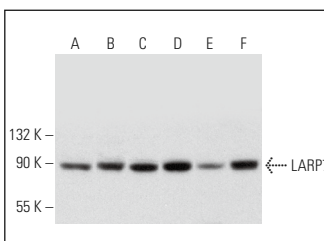
Suitable for use as control antibody for LARP7 siRNA (h): sc-89099, LARP7 siRNA (m): sc-146654, LARP7 shRNA Plasmid (h): sc-89099-SH, LARP7 shRNA Plasmid (m): sc-146654-SH, LARP7 shRNA (h) Lentiviral Particles: sc-89099-V and LARP7 shRNA (m) Lentiviral Particles: sc-146654-V.

Molecular Weight (predicted) of LARP7: 67 kDa.

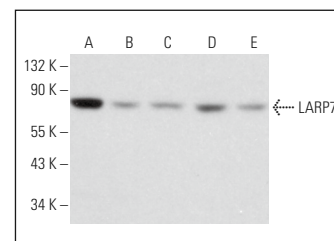
Molecular Weight (observed) of highly charged LARP7: 90 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



LARP7 (E-5): sc-515209. Western blot analysis of LARP7 expression in Jurkat nuclear extract (A) and HeLa (B), NIH/3T3 (C), WiDr (D), HL-60 (E) and Jurkat (F) whole cell lysates.



LARP7 (E-5): sc-515209. Western blot analysis of LARP7 expression in NIH/3T3 (A), SUP-T1 (B), HL-60 (C), U-698-M (D) and A-431 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Sui, X., et al. 2018. LARP7 in papillary thyroid carcinoma induces NIS expression through suppression of the SHH signaling pathway. *Mol. Med. Rep.* 17: 7521-7528.
- Faust, T.B., et al. 2018. The HIV-1 Tat protein recruits a ubiquitin ligase to reorganize the 7SK snRNP for transcriptional activation. *Elife* 7: e31879.
- Wang, X., et al. 2020. LARP7-mediated U6 snRNA modification ensures splicing fidelity and spermatogenesis in mice. *Mol. Cell* 77: 999-1013.e6.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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