SANTA CRUZ BIOTECHNOLOGY, INC.

# LSm10 (C-15): sc-74949

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*The Power to Question*

## BACKGROUND

LSm10 (U7 snRNA-associated Sm-like protein LSm10) is a nuclear protein that belongs to the snRNP (small nuclear ribonucleoproteins) Sm protein family. The survival of motor neurons (SMN) complex mediates the assembly of snRNPs involved in splicing and histone RNA processing. A crucial step in this process is the binding of Sm proteins onto the SMN protein. LSm10 and LSm11, mammalian homologs of the yeast Sm proteins D1 and D2, are important for U7 snRNP function and subcellular localization. U7 snRNP is an RNA molecule involved in the splicing of animal histone pre-mRNAs. Lsm10 and Lsm11 also associate with pICln (chloride ion current inducer protein), which interacts with Sm proteins to inhibit their assembly on U RNA. LSm10 interactions with U7 snRNA and pICln may provide the means for using modified U7 snRNA derivatives to alter specific pre-mRNA splicing events, potentially leading to advances in antisense gene therapy.

## REFERENCES


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2. Dominski, Z., Erkmann, J.A., Yang, X., Sànchez, R. and Marzluff, W.F. 2002. A novel zinc-finger protein is associated with U7 snRNP and interacts with the stem-loop binding protein in the histone pre-mRNP to stimulate 3'-end processing. Genes Dev. 16: 58-71.
3. Pillai, R.S., Grimmler, M., Meister, G., Will, C.L., Lührmann, R., Fischer, U. and Schümperli, D. 2003. Unique Sm core structure of U7 snRNPs: assembly by a specialized SMN complex and the role of a new component, LSm11, in histone RNA processing. Genes Dev. 17: 2321-2333.
4. Schümperli, D. and Pillai, R.S. 2004. The special Sm core structure of the U7 snRNP: far-reaching significance of a small nuclear ribonucleoprotein. Cell. Mol. Life Sci. 61: 2560-2570.
5. Lehner, B. and Sanderson, C.M. 2004. A protein interaction framework for human mRNA degradation. Genome Res. 14: 1315-1323.
6. Rual, J.F., Venkatesan, K., Hao, T., Hirozane-Kishikawa, T., Dricot, A., Li, N., Berriz, G.F., Gibbons, F.D., Dreze, M., Hill, D.E., Roth, F.P. and Vidal, M. 2005. Towards a proteome-scale map of the human protein-protein interaction network. Nature 437: 1173-1178.


## CHROMOSOMAL LOCATION

Genetic locus: LSM10 (human) mapping to 1p34.3 ; Lsm10 (mouse) mapping to 4 D2.2.

## SOURCE

LSm10 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LSm10 of human origin.

## STORAGE

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

## 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-74949 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-74949 X, 200 µg/0.1 ml.

## APPLICATIONS

LSm10 (C-15) is recommended for detection of LSm10 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).

LSm10 (C-15) is also recommended for detection of LSm10 in additional species, including equine and canine.

Suitable for use as control antibody for LSm10 siRNA (h): sc-75702, LSm10 siRNA (m): sc-75703, LSm10 shRNA Plasmid (h): sc-75702-SH, LSm10 shRNA Plasmid (m): sc-75703-SH, LSm10 shRNA (h) Lentiviral Particles: sc-75702-V and LSm10 shRNA (m) Lentiviral Particles: sc-75703-V.

LSm10 (C-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LSm10: 14 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.