SANTA CRUZ BIOTECHNOLOGY, INC.

LSm5 (FL-91): sc-98328

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sm and Sm-like (LSm) proteins form donut-shaped heptameric complexes that are involved in various steps of RNA metabolism. LSm proteins facilitate RNA protein interactions and structural changes that are required during ribosomal subunit assembly. LSm proteins contain a Sm sequence motif which has two regions separated by a linker of variable length that forms a loop. LSm5, also known as YER146W, is a 91 amino acid protein belonging to the snRNP Sm family. Localized to the nucleus, LSm5 has been found to play a role in the formation and function of the U6 snRNP. Specifically, LSm5 binds to the 3' end of U6 snRNA and facilitates U4/U6 duplex formation.

REFERENCES

1. Salgado-Garrido, J., et al. 1999. Sm and Sm-like proteins assemble in two related complexes of deep evolutionary origin. EMBO J. 18: 3451-3462.
2. Achsel, T., et al. 1999. A doughnut-shaped heteromer of human Sm-like proteins binds to the 3'-end of U6 snRNA, thereby facilitating U4/U6 duplex formation *in vitro*. EMBO J. 18: 5789-5802.
3. Friesen, W.J. and Dreyfuss, G. 2000. Specific sequences of the Sm and Sm-like (Lsm) proteins mediate their interaction with the spinal muscular atrophy disease gene product (SMN). J. Biol. Chem. 275: 26370-26375.
4. Eystathioy, T., et al. 2002. Autoantibody to hLSm4 and the heptameric LSm complex in anti-Sm sera. Arthritis Rheum. 46: 726-734.
5. Ingelfinger, D., et al. 2002. The human LSm1-7 proteins colocalize with the mRNA-degrading enzymes Dcp1/2 and Xrnl in distinct cytoplasmic foci. RNA 8: 1489-1501.
6. Lehner, B. and Sanderson, C.M. 2004. A protein interaction framework for human mRNA degradation. Genome Res. 14: 1315-1323.
7. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 607285. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: LSM5 (human) mapping to 7p14.3; Lsm5 (mouse) mapping to 6 B3.

SOURCE

LSm5 (FL-91) is a rabbit polyclonal antibody raised against amino acids 1-91 representing full length LSm5 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-98328 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

LSm5 (FL-91) is recommended for detection of LSm5 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).

LSm5 (FL-91) is also recommended for detection of LSm5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LSm5 siRNA (h): sc-75709, LSm5 siRNA (m): sc-75710, LSm5 shRNA Plasmid (h): sc-75709-SH, LSm5 shRNA Plasmid (m): sc-75710-SH, LSm5 shRNA (h) Lentiviral Particles: sc-75709-V and LSm5 shRNA (m) Lentiviral Particles: sc-75710-V.

LSm5 (FL-91) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LSm5: 10 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.