SANTA CRUZ BIOTECHNOLOGY, INC.

SRm300 (H-111): sc-292291

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The Power to Question

BACKGROUND

The SRm160/300 splicing coactivator, which consists of the serine/arginine (SR)-related nuclear matrix protein and a nuclear matrix antigen, functions in splicing by promoting critical interactions between splicing factors bound to pre-mRNA. This splicing pathway involves five core small nuclear ribonucleoprotein particles (snRNPs). The SR family proteins, which coordinately bind to pre-mRNA slicing enhancer elements, are required for accurate splice site recognition, and regulate alterative splicing patterns. The recognized splicing enhancer elements, known also as exonic enhancer splicing sequences, are short RNA sequences that are capable of activating weak splice sites in adjacent introns, and contain specific binding sites for the serine/arginine (SR)-rich splicing factors. The SRm160 and 300 kDa antigens contain domains rich in SR motifs, but are distinctly different than the SR factors as they lack an RNA recognition motif and cannot directly induce RNA splicing. These proteins rather function as coactivators that stabilize the splicing complex and mediate the U1 snRNP-splicing pathway.

REFERENCES

1. Fu, X.D. 1993. Specific commitment of different pre-mRNAs to splicing by single SR proteins. Nature 365: 82-85.
2. Badolato, J., Gardiner, E., Morrison, N. and Eisman, J. 1995. Identification and characterization of a novel human RNA-binding protein. Gene 166: 323-327.
3. Blencowe, B.J., Issner, R., Nickerson, J.A. and Sharp, P.A. 1998. A coactivator of pre-mRNA splicing. Genes Dev. 12: 996-1009.
4. Schaal, T.D. and Maniatis, T. 1999. Selection and characterization of pre-mRNA splicing enhancers: identification of novel SR protein-specific enhancer sequences. Mol. Cell. Biol. 19: 1705-1719.
5. Eldridge, A.G., Li, Y., Sharp, P.A. and Blencowe, B.J. 1999. The SRm160/300 splicing coactivator is required for exon-enhancer function. Proc. Natl. Acad. Sci. USA 96: 6125-6130.
6. Blencowe, B.J., Bauren, G., Eldridge, A.G., Issner, R., Nickerson, J.A., Rosonina, E. and Sharp, P.A. 2000. The SRm160/300 splicing coactivator subunits. RNA 6: 111-120.
7. Blencowe, B.J. 2000. Exonic splicing enhancers: mechanism of action, diversity and role in human genetic diseases. Trends Biochem. Sci. 25: 106-110.

CHROMOSOMAL LOCATION

Genetic locus: SRRM2 (human) mapping to 16p13.3, Srrm2 (human) mapping to 17 A3.3.

SOURCE

SRm300 (H-111) is a rabbit polyclonal antibody raised against amino acids 2371-2481 mapping near the C-terminus of SRm300 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-292291 X, 200 µg/0.1 ml.

APPLICATIONS

SRm300 (H-111) is recommended for detection of SRm300 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).

SRm300 (H-111) is also recommended for detection of SRm300 in additional species, including porcine.

Suitable for use as control antibody for SRm300 siRNA (h): sc-38337, SRm300 shRNA Plasmid (h): sc-38337-SH and SRm300 shRNA (h) Lentiviral Particles: sc-38337-V.

SRm300 (H-111) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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.