SANTA CRUZ BIOTECHNOLOGY, INC.

SRp20 (h): 293 Lysate: sc-110769

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pre-mRNA splicing enhancer elements are short RNA sequences capable of activating weak splice sites in nearby introns that are required for accurate splice site recognition and the control of alternative splicing. Splicing enhancer elements contain specific binding sites for serine/arginine (SR)-rich splicing factors, which include SC35, 9G8, SRp20, and SF2/ASF. The family of SR factors all contain one or more RNA recognition motifs (RRM) and an arginine/serine (RS)-rich domain. They are not only essential for constitutive splicing but also regulate splicing in a concentration-dependent manner by influencing the selection of alternative splice sites. The majority of SR proteins, including SC35 and SRp40, are confined to the nucleus, while SF2/ASF, SRp20, and 9G8 are continuously shuttled between the nucleus and the cytoplasm and contribute to mRNA transport. The activity of SR proteins in regulated splicing is antagonized by members of the hnRNP A/B family of proteins, which induce drastic shifts in the selection of splicing sites. An additional SR-associated protein, p32, tightly associates with SR factors and preferentially inhibits ASF/SF2 functioning as both a splicing enhancer and splicing repressor protein by preventing the stable interaction of ASF/SF2 and RNA.

REFERENCES

1. Fu, X.D. 1993. Specific commitment of different pre-mRNAs to splicing by single SR proteins. Nature 365: 82-85.
2. Mayeda, A., et al. 1994. Function of conserved domains of hnRNP A1 and other hnRNP A/B proteins. EMBO J. 13: 5483-5495.
3. Jumaa, H., et al. 1997. The splicing factor SRp20 modifies splicing of its own mRNA and SF2/ASF antagonizes this regulation. EMBO J. 16: 5077-5085.
4. Caceres, J.F., et al. 1998. A specific subset of SR proteins shuttles continuously between the nucleus and the cytoplasm. Genes Dev. 12: 55-66.
5. Schaal, T.D., et al. 1999. Selection and characterization of pre-mRNA splicing enhancers: identification of novel SR protein-specific enhancer sequences. Mol. Cell. Biol. 19: 1705-1719.
6. Cavaloc, Y., et al. 1999. The splicing factors 9G8 and SRp20 transactivate splicing through different and specific enhancers. RNA 5: 468-483.
7. Petersen-Mahrt, S.K., et al. 1999. The splicing factor-associated protein, p32, regulates RNA splicing by inhibiting SF2/ASF RNA binding and phosphorylation. EMBO J. 18: 1014-1024.

CHROMOSOMAL LOCATION

Genetic locus: SRSF3 (human) mapping to 6p21.31.

PRODUCT

SRp20 (h): 293 Lysate represents a lysate of human SRp20 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

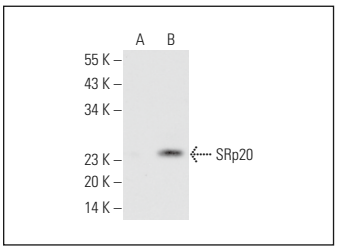
APPLICATIONS

SRp20 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive SRp20 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-tranfected 293 cells.

SRp20 (7B4): sc-13510 is recommended as a positive control antibody for Western Blot analysis of enhanced human SRp20 expression in SRp20 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



SRp20 (7B4): sc-13510. Western blot analysis of SRp20 expression in non-transfected: sc-110760 (**A**) and human SRp20 transfected: sc-110769 (**B**) 293 whole cell lysates.

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.