SANTA CRUZ BIOTECHNOLOGY, INC.

SRp20 (G-8): sc-398541

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 ASF/SF2 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.

CHROMOSOMAL LOCATION

Genetic locus: SRSF3 (human) mapping to 6p21.31; Srsf3 (mouse) mapping to 17 A3.3.

SOURCE

SRp20 (G-8) is a mouse monoclonal antibody raised against amino acids 1-164 representing full length SRp20 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SRp20 (G-8) is available conjugated to agarose (sc-398541 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398541 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398541 PE), fluorescein (sc-398541 FITC), Alexa Fluor® 488 (sc-398541 AF488), Alexa Fluor® 546 (sc-398541 AF546), Alexa Fluor® 594 (sc-398541 AF594) or Alexa Fluor® 647 (sc-398541 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398541 AF680) or Alexa Fluor® 790 (sc-398541 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

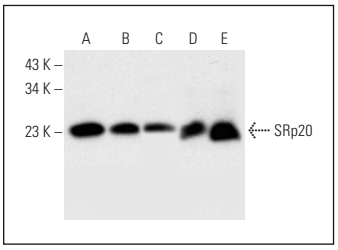
SRp20 (G-8) is recommended for detection of SRp20 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 SRp20 siRNA (h): sc-38338, SRp20 siRNA (m): sc-38339, SRp20 shRNA Plasmid (h): sc-38338-SH, SRp20 shRNA Plasmid (m): sc-38339-SH, SRp20 shRNA (h) Lentiviral Particles: sc-38338-V and SRp20 shRNA (m) Lentiviral Particles: sc-38339-V.

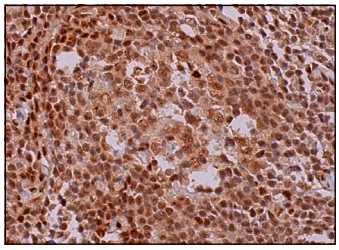
Molecular Weight of SRp20: 19 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, BJAB nuclear extract: sc-2145 or HeLa nuclear extract: sc-2120.

DATA



SRp20 (G-8): sc-398541. Western blot analysis of SRp20 expression in BJAB (**A**), Jurkat (**B**) and F9 (**C**) whole cell lysates and HeLa (**D**) and BJAB (**E**) nuclear extracts.



SRp20 (G-8): sc-398541. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear and cytoplasmic staining of cells in germinal center and cells in non-germinal center.

SELECT PRODUCT CITATIONS

1. Neueder, A., et al. 2018. Regulatory mechanisms of incomplete Huntingtin mRNA splicing. Nat. Commun. 9: 3955.
2. Zhang, C., et al. 2021. B7-H3 is spliced by SRSF3 in colorectal cancer. Cancer Immunol. Immunother. 70: 311-321.

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.