SANTA CRUZ BIOTECHNOLOGY, INC.

SRp20 (3G271): sc-73059

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.

CHROMOSOMAL LOCATION

Genetic locus: SFRS3 (human) mapping to 6p21.31; Srsf3 (mouse) mapping to 17 A3.3.

SOURCE

SRp20 (3G271) is a mouse monoclonal antibody raised against amino acids 84-104 of 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.

STORAGE

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

APPLICATIONS

SRp20 (3G271) is recommended for detection of SRp20 of mouse, rat, human and avian 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

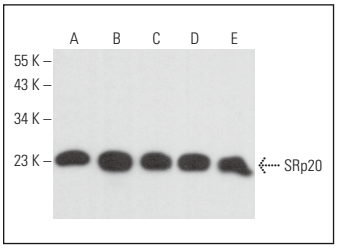
Molecular Weight of SRp20: 19 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Jurkat whole cell lysate: sc-2204 or PC-12 cell lysate: sc-2250.

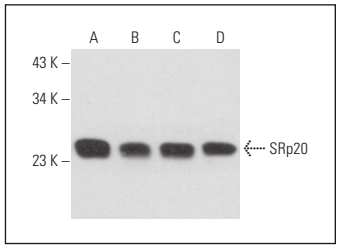
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SRp20 (3G271): sc-73059. Western blot analysis of SRp20 expression in RAW 264.7 (**A**), Jurkat (**B**), PC-12 (**C**), BJAB (**D**) and DT40 (**E**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



SRp20 (3G271): sc-73059. Western blot analysis of SRp20 expression in Jurkat (**A**), Hep G2 (**B**), PC-12 (**C**) and RAW 264.7 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Jain, A., et al. 2012. Spliceosome protein (SRp) regulation of glucocorticoid receptor isoforms and glucocorticoid response in human trabecular meshwork cells. Invest. Ophthalmol. Vis. Sci. 53: 857-866.
2. Xu, L., et al. 2019. Inclusion of hnRNP L alternative exon 7 is associated with good prognosis and inhibited by oncogene SRSF3 in head and neck squamous cell carcinoma. Biomed. Res. Int. 2019: 9612425.
3. Sun, Y., et al. 2019. Downregulation of SRSF3 by antisense oligonucleotides sensitizes oral squamous cell carcinoma and breast cancer cells to paclitaxel treatment. Cancer Chemother. Pharmacol. 84: 1133-1143.

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.

CONJUGATES

See **SR (1H4): sc-13509** for SR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.