SANTA CRUZ BIOTECHNOLOGY, INC.

SRp20 (7B4): sc-13510

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.

CHROMOSOMAL LOCATION

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

SOURCE

SRp20 (7B4) is a mouse monoclonal antibody raised against amino acids 84-104 of SRp20 of human origin.

PRODUCT

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

SRp20 (7B4) is available conjugated to agarose (sc-13510 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13510 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13510 PE), fluorescein (sc-13510 FITC), Alexa Fluor® 488 (sc-13510 AF488), Alexa Fluor® 546 (sc-13510 AF546), Alexa Fluor® 594 (sc-13510 AF594) or Alexa Fluor® 647 (sc-13510 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13510 AF680) or Alexa Fluor® 790 (sc-13510 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SRp20 (7B4) 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).

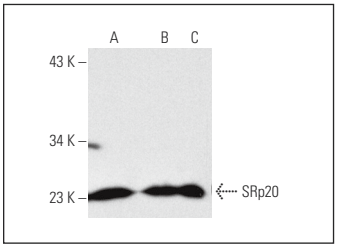
Suitable for use as control antibody for SRp20 siRNA (h): sc-38338, SRp20 siRNA (m): sc-38339, SRp20 shRNA Plasmid (h): sc-38338-SH, SRp20 shRNA Plasmid (m): sc-38339-SH, SRp20 shRNA (h) Lentiviral Particles: sc-38338-V and SRp20 shRNA (m) Lentiviral Particles: sc-38339-V.

Molecular Weight of SRp20: 19 kDa.

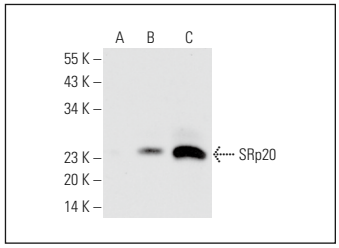
STORAGE

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

DATA



SRp20 (7B4): sc-13510. Western blot analysis of SRp20 expression in BJAB (**A**), F9 (**B**) and DT40 (**C**) whole cell lysates.



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

SELECT PRODUCT CITATIONS

1. He, X., et al. 2004. Alternative splicing of the multidrug resistance protein 1/ATP binding cassette transporter subfamily gene in ovarian cancer creates functional splice variants and is associated with increased expression of the splicing factors PTB and SRp20. Clin. Cancer Res. 10: 4652-4660.
2. Saeki, K., et al. 2005. Proteomic analysis on insulin signaling in human hematopoietic cells: identification of CLIC1 and SRp20 as novel downstream effectors of insulin. Am. J. Physiol. Endocrinol. Metab. 289: E419-E428.
3. He, X., et al. 2011. Knockdown of splicing factor SRp20 causes apoptosis in ovarian cancer cells and its expression is associated with malignancy of epithelial ovarian cancer. Oncogene 30: 356-365.
4. Ameyar-Zazoua, M., et al. 2012. Argonaute proteins couple chromatin silencing to alternative splicing. Nat. Struct. Mol. Biol. 19: 998-1004.
5. Chettouh, H., et al. 2013. Mitogenic Insulin receptor-A is overexpressed in human hepatocellular carcinoma due to EGFR-mediated dysregulation of RNA splicing factors. Cancer Res. 73: 3974-3986.
6. Naro, C., et al. 2014. The centrosomal kinase NEK2 is a novel splicing factor kinase involved in cell survival. Nucleic Acids Res. 42: 3218-3227.
7. He, X. and Zhang, P. 2015. Serine/arginine-rich splicing factor 3 (SRSF3) regulates homologous recombination-mediated DNA repair. Mol. Cancer 14: 158.
8. Doktor, T.K., et al. 2017. RNA-sequencing of a mouse-model of spinal muscular atrophy reveals tissue-wide changes in splicing of U12-dependent introns. Nucleic Acids Res. 45: 395-416.
9. Kim, H.R., et al. 2017. SRSF3-regulated miR-132/212 controls cell migration and invasion by targeting YAP1. Exp. Cell Res. 358: 161-170.

RESEARCH USE

For research use only, not for use in diagnostic procedures.