

# SRp20 (C-1): sc-365772

## 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.
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.

## CHROMOSOMAL LOCATION

Genetic locus: SRSF3 (human) mapping to 6p21.31; Sfrs3 (mouse) mapping to 17 A3.3.

## SOURCE

SRp20 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 131-159 near the C-terminus of SRp20 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365772 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

SRp20 (C-1) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

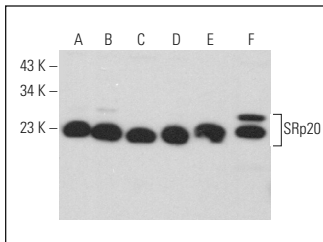
SRp20 (C-1) is also recommended for detection of SRp20 in additional species, including equine, canine, bovine, porcine and avian.

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.

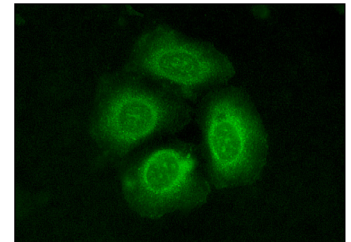
Molecular Weight of SRp20: 19 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, BJAB nuclear extract: sc-2145 or F9 cell lysate: sc-2245.

## DATA



SRp20 (C-1): sc-365772. Western blot analysis of SRp20 expression in HeLa (A), BJAB (B), NIH/3T3 (C) and K-562 (D) nuclear extracts and F9 (E) and U-698-M (F) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



SRp20 (C-1): sc-365772. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Munoz, U., et al. 2012. Hepatocyte growth factor enhances alternative splicing of the Krüppel-like factor 6 (KLF6) tumor suppressor to promote growth through SRSF1. *Mol. Cancer Res.* 10: 1216-1227.

## 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.



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