

SF2/ASF (3G268): sc-73026

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: SRSF1 (human) mapping to 17q22; Srsf1 (mouse) mapping to 11 C.

SOURCE

SF2/ASF (3G268) is a mouse monoclonal antibody epitope mapping near the N-terminus of the SF2/ASF protein consisting of the RRM1 region.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SF2/ASF (3G268) is recommended for detection of SF2/ASF 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for SF2/ASF siRNA (h): sc-38319, SF2/ASF siRNA (m): sc-38320, SF2/ASF shRNA Plasmid (h): sc-38319-SH, SF2/ASF shRNA Plasmid (m): sc-38320-SH, SF2/ASF shRNA (h) Lentiviral Particles: sc-38319-V and SF2/ASF shRNA (m) Lentiviral Particles: sc-38320-V.

Molecular Weight of SF2/ASF: 32 kDa.

Positive Controls: LADMAC whole cell lysate: sc-364189, SF2/ASF (h): 293T Lysate: sc-113535 or Raji whole cell lysate: sc-364236.

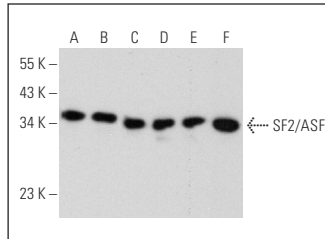
STORAGE

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

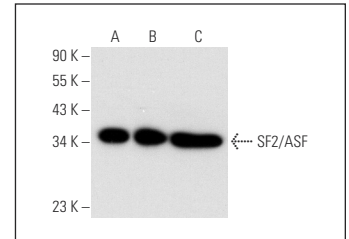
RESEARCH USE

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

DATA



SF2/ASF (3G268): sc-73026. Western blot analysis of SF2/ASF expression in Jurkat (A), A-431 (B), LADMAC (C), F9 (D), C6 (E) and H19-7/IGF-IR (F) whole cell lysates.



SF2/ASF (3G268): sc-73026. Western blot analysis of SF2/ASF expression in non-transfected 293T: sc-117752 (A), human SF2/ASF transfected 293T: sc-113535 (B) and Raji (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Li, S., et al. 2013. Rbm20 regulates titin alternative splicing as a splicing repressor. *Nucleic Acids Res.* 41: 2659-2672.
- Fu, Y., et al. 2013. SRSF1 and SRSF9 RNA binding proteins promote Wnt signalling-mediated tumorigenesis by enhancing β -catenin biosynthesis. *EMBO Mol. Med.* 5: 737-750.
- Zhou, Y., et al. 2013. ALS-associated FUS mutations result in compromised FUS alternative splicing and autoregulation. *PLoS Genet.* 9: e1003895.
- Zaccara, S., et al. 2014. p53-directed translational control can shape and expand the universe of p53 target genes. *Cell Death Differ.* 21: 1522-1534.
- Vautrot, V., et al. 2015. Fluorescence *in situ* hybridization of small non-coding RNAs. *Methods Mol. Biol.* 1296: 73-83.
- Vautrot, V., et al. 2016. Enhanced SRSF5 protein expression reinforces Lamin A mRNA production in HeLa cells and fibroblasts of progeria patients. *Hum. Mutat.* 37: 280-291.
- Wang, L., et al. 2018. Novel RNA-affinity proteogenomics dissects tumor heterogeneity for revealing personalized markers in precision prognosis of cancer. *Cell Chem. Biol.* 25: 619-633.
- Donadoni, M., et al. 2019. Alcohol exposure alters pre-mRNA splicing of antiapoptotic Mcl-1L isoform and induces apoptosis in neural progenitors and immature neurons. *Cell Death Dis.* 10: 447.
- Duan, Y., et al. 2021. Long noncoding RNA DGCR5 involves in tumorigenesis of esophageal squamous cell carcinoma via SRSF1-mediated alternative splicing of Mcl-1. *Cell Death Dis.* 12: 587.
- Choi, K., et al. 2021. Regulation of survival motor neuron gene expression by calcium signaling. *Int. J. Mol. Sci.* 22: 10234.

CONJUGATES

See **SF2/ASF (96): sc-33652** for SF2/ASF antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.