

splicing factor 1 (YZ-2): sc-101143

BACKGROUND

Mammalian splicing factor 1 (designated SF1, zinc finger protein 162, ZFM1, CW17R and mammalian branch point binding protein [mBBP]) specifically recognizes the seven-nucleotide branch point sequence located at 3' splice sites and participates in the assembly of early spliceosomal complexes. Splicing factor 1 functions as a transcriptional repressor and may control both proliferation and expression of pro-inflammatory gene products in smooth muscle cells. In addition, cytokine-induced downregulation of splicing factor 1 expression may contribute to the pathogenesis of hyperproliferative inflammatory diseases. The structure of splicing factor 1 contains a nuclear transport domain, a metal binding motif and glutamine- and proline-rich regions. Human splicing factor 1 also exists as several different isoforms, H1-isoform and Bo-isoform, produced by alternative splicing events. The human splicing factor 1 gene is located on chromosome 11 close to the gene encoding Menin, the gene responsible for multiple endocrine neoplasia-type 1 (MEN1).

REFERENCES

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2. Kramer, A., Quentin, M. and Mulhauser, F. 1998. Diverse modes of alternative splicing of human splicing factor SF1 deduced from the exon-intron structure of the gene. *Gene* 211: 29-37.
3. Peled-Zehavi, H., Berglund, J.A., Rosbash, M. and Frankel, A.D. 2001. Recognition of RNA branch point sequences by the KH domain of splicing factor 1 (mammalian branch point binding protein) in a splicing factor complex. *Mol. Cell. Biol.* 21: 5232-5241.
4. Liu, Z., Luyten, I., Bottomley, M.J., Messias, A.C., Houngrinou-Molango, S., Sprangers, R., Zanier, K., Kramer, A. and Sattler, M. 2001. Structural basis for recognition of the intron branch site RNA by splicing factor 1. *Science* 294: 1098-1102.
5. Cattaruzza, M., Schafer, K. and Hecker, M. 2002. Cytokine-induced down-regulation of ZFM1/splicing factor 1 promotes smooth muscle cell proliferation. *J. Biol. Chem.* 277: 6582-6589.

CHROMOSOMAL LOCATION

Genetic locus: SF1 (human) mapping to 11q13.1.

SOURCE

splicing factor 1 (YZ-2) is a mouse monoclonal antibody raised against recombinant splicing factor 1 of human origin.

PRODUCT

Each vial contains 50 μ g IgG_{2a} in 500 μ l 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

splicing factor 1 (YZ-2) is recommended for detection of splicing factor 1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 splicing factor 1 siRNA (h): sc-44115, splicing factor 1 shRNA Plasmid (h): sc-44115-SH and splicing factor 1 shRNA (h) Lentiviral Particles: sc-44115-V.

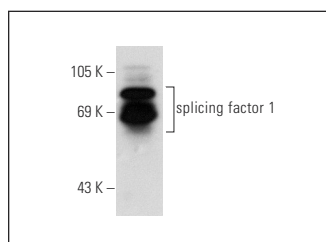
Molecular Weight of splicing factor 1: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or 293T whole cell lysate.

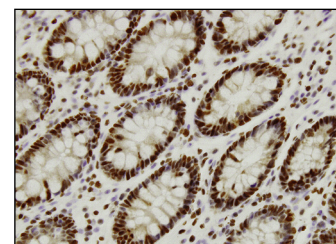
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



splicing factor 1 (YZ-2): sc-101143. Western blot analysis of splicing factor 1 expression in 293T whole cell lysate.



splicing factor 1 (YZ-2): sc-101143. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing nuclear localization.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.