

splicing factor 1 (E-9): sc-365269

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., Hounginou-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; Sf1 (mouse) mapping to 19 A.

SOURCE

splicing factor 1 (E-9) is a mouse monoclonal antibody raised against amino acids 1-160 mapping at the N-terminus of splicing factor 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-365269 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

splicing factor 1 (E-9) is recommended for detection of splicing factor 1 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).

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.

Suitable for use as control antibody for splicing factor 1 siRNA (h): sc-44115, splicing factor 1 siRNA (m): sc-60009, splicing factor 1 shRNA Plasmid (h): sc-44115-SH, splicing factor 1 shRNA Plasmid (m): sc-60009-SH, splicing factor 1 shRNA (h) Lentiviral Particles: sc-44115-V and splicing factor 1 shRNA (m) Lentiviral Particles: sc-60009-V.

splicing factor 1 (E-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

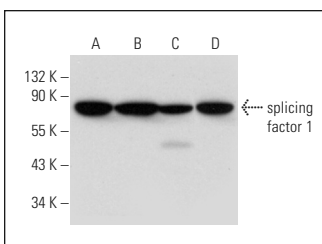
Molecular Weight of splicing factor 1: 70 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, Jurkat whole cell lysate: sc-2204 or U-251-MG whole cell lysates: sc-364176.

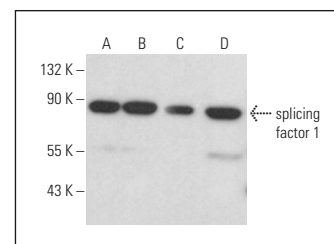
RECOMMENDED SUPPORT REAGENTS

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



splicing factor 1 (E-9): sc-365269. Western blot analysis of splicing factor 1 expression in KNRK (A) and Sol8 (B) nuclear extracts and U-251-MG (C) and Jurkat (D) whole cell lysates.



splicing factor 1 (E-9): sc-365269. Western blot analysis of splicing factor 1 expression in Sol8 (A), C2C12 (B), MOLT-4 (C) and A-10 (D) whole cell lysates.

STORAGE

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