SANTA CRUZ BIOTECHNOLOGY, INC.

splicing factor 1 (N-14): sc-21157

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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).

CHROMOSOMAL LOCATION

Genetic locus: SF1 (human) mapping to 11q13.1; Sf1 (mouse) mapping to 19 A.

SOURCE

splicing factor 1 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of splicing factor 1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-21157 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

splicing factor 1 (N-14) is recommended for detection of splicing factor 1 of mouse, rat and human 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)], 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).

splicing factor 1 (N-14) is also recommended for detection of splicing factor 1 in additional species, including canine, bovine and porcine.

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.

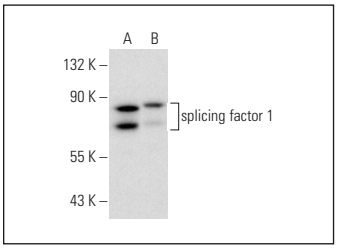
Molecular weight of splicing factor 1: 70 kDa.

Positive Controls: KNRK nuclear extract: sc-2141, HeLa whole cell lysate: sc-2200 or Sol8 nuclear extract: sc-2157.

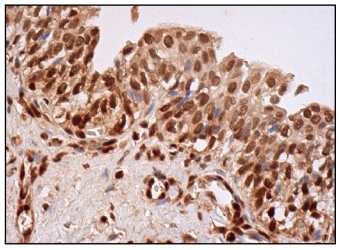
STORAGE

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

DATA



splicing factor 1 (N-14): sc-21157. Western blot analysis of splicing factor 1 expression in KNRK (**A**) and Sol8 (**B**) nuclear extracts.



splicing factor 1 (N-14): sc-21157. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear staining of urothelial cells.

SELECT PRODUCT CITATIONS

1. Hara, T., et al. 2007. Mass spectrometry analysis of the native protein complex containing actinin-4 in prostate cancer cells. Mol. Cell. Proteomics 6: 479-491.
2. Shitashige, M., et al. 2007. Involvement of splicing factor-1 in β-catenin/T cell factor-4-mediated gene transactivation and pre-mRNA splicing. Gastroenterology 132: 1039-1054.
3. Shitashige, M., et al. 2007. Increased susceptibility of SF-$1^{+/-}$ mice to azoxymethane-induced colon tumorigenesis. Cancer Sci. 98: 1862-1867.
4. Zhu, R., et al. 2010. Deficiency of splicing factor 1 suppresses the occurrence of testicular germ cell tumors. Cancer Res. 70: 7264-7272.

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.