SANTA CRUZ BIOTECHNOLOGY, INC.

SPF30 (H-152): sc-366016

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SPF30 (survival of motor neuron-related-splicing factor 30), also known as SMNDC1 (survival motor neuron domain containing 1) or SMNR (SMN-related protein), is an essential splicing factor required for spliceosome assembly that belongs to the SMN family. It contains one Tudor domain with significant similarity to SMN (survival motor neuron) and is expressed in skeletal muscle, pancreas and heart, localizing to Cajal bodies and nuclear speckles. SPF30 plays an important role in spliceosome assembly and directly interacts with five U SnRNPs. The loss of SPF30 causes spliceosome assembly to arrest at prespliceosomes (A complex). This supports a function for SPF30 in mediating the incorporation/recruitment of U4/U5/U6 tri-SnRNP to the prespliceosome. In addition, the overexpression of SPF30 can lead to apoptosis.

REFERENCES

1. Talbot, K., Miguel-Aliaga, I., Mohaghegh, P., Ponting, C.P. and Davies, K.E. 1998. Characterization of a gene encoding survival motor neuron (SMN)-related protein, a constituent of the spliceosome complex. Hum. Mol. Genet. 7: 2149-2156.
2. Neubauer, G., King, A., Rappsilber, J., Calvio, C., Watson, M., Ajuh, P., Sleeman, J., Lamond, A. and Mann, M. 1998. Mass spectrometry and EST-database searching allows characterization of the multi-protein spliceosome complex. Nat. Genet. 20: 46-50.
3. Meister, G., Hannus, S., Plöttner, O., Baars, T., Hartmann, E., Fakan, S., Laggerbauer, B. and Fischer, U. 2001. SMNrp is an essential pre-mRNA splicing factor required for the formation of the mature spliceosome. EMBO J. 20: 2304-2314.
4. Rappsilber, J., Ajuh, P., Lamond, A.I. and Mann, M. 2001. SPF30 is an essential human splicing factor required for assembly of the U4/U5/U6 tri-small nuclear ribonucleoprotein into the spliceosome. J. Biol. Chem. 276: 31142-31150.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603519. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Narayanan, U., Achsel, T., Lührmann, R. and Matera, A.G. 2004. Coupled *in vitro* import of U snRNPs and SMN, the spinal muscular atrophy protein. Mol. Cell 16: 223-234.

CHROMOSOMAL LOCATION

Genetic locus: SMNDC1 (human) mapping to 10q25.2; Smndc1 (mouse) mapping to 19 D2.

SOURCE

SPF30 (H-152) is a rabbit polyclonal antibody raised against amino acids 1-152 mapping at the N-terminus of SPF30 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.

APPLICATIONS

SPF30 (H-152) is recommended for detection of SPF30 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SPF30 (H-152) is also recommended for detection of SPF30 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for SPF30 siRNA (h): sc-63054, SPF30 siRNA (m): sc-63055, SPF30 shRNA Plasmid (h): sc-63054-SH, SPF30 shRNA Plasmid (m): sc-63055-SH, SPF30 shRNA (h) Lentiviral Particles: sc-63054-V and SPF30 shRNA (m) Lentiviral Particles: sc-63055-V.

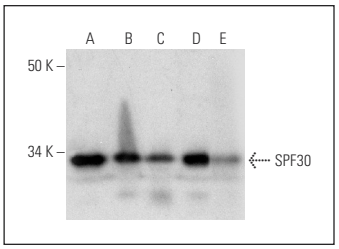
Molecular Weight of SPF30: 30 kDa.

Positive Controls: SPF30 (h): 293 Lysate: sc-112339, SJRH30 cell lysate: sc-2287 or Jurkat whole cell lysate: sc-2204.

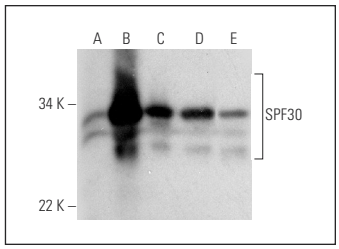
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SPF30 (H-152): sc-366016. Western blot analysis of SPF30 expression in Jurkat (**A**), PC-12 (**B**), RAW 264.7 (**C**) and A-431 (**D**) whole cell lysates and rat placenta tissue extract (**E**).



SPF30 (H-152): sc-366016. Western blot analysis of SPF30 expression in non-transfected 293: sc-110760 (**A**), human SPF30 transfected 293: sc-112339 (**B**), SJRH30 (**C**), L8 (**D**) and L6 (**E**) 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.

RESEARCH USE

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