

SPF30 (C-19): sc-66645

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., Lagerbauer, 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/>

CHROMOSOMAL LOCATION

Genetic locus: SMNDC1 (human) mapping to 10q25.2; SmnDC1 (mouse) mapping to 19 D2.

SOURCE

SPF30 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SPF30 of human origin.

STORAGE

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

PROTOCOLS

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

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-66645 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SPF30 (C-19) 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 (C-19) 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 and SPF30 siRNA (m): sc-63055; and as shRNA Plasmid control antibody for SPF30 shRNA Plasmid (h): sc-63054-SH and SPF30 shRNA Plasmid (m): sc-63055-SH.

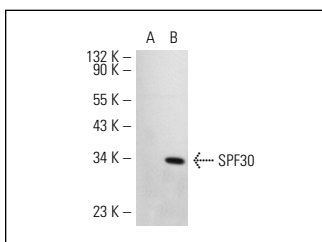
Molecular Weight of SPF30: 30 kDa.

Positive Controls: SPF30 (h): 293 Lysate: sc-112339.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SPF30 (C-19): sc-66645. Western blot analysis of SPF30 expression in non-transfected: sc-110760 (A) and human SPF30 transfected: sc-112339 (B) 293 whole cell lysates.

RESEARCH USE

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