

SPF30 (G-8): sc-376887

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., et al. 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., et al. 1998. Mass spectrometry and EST-database searching allows characterization of the multi-protein spliceosome complex. *Nat. Genet.* 20: 46-50.
3. Meister, G., et al. 2001. SMNrp is an essential pre-mRNA splicing factor required for the formation of the mature spliceosome. *EMBO J.* 20: 2304-2314.
4. Rappilber, J., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

SPF30 (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 211-238 at the C-terminus of SPF30 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SPF30 (G-8) is available conjugated to agarose (sc-376887 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376887 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376887 PE), fluorescein (sc-376887 FITC), Alexa Fluor® 488 (sc-376887 AF488), Alexa Fluor® 546 (sc-376887 AF546), Alexa Fluor® 594 (sc-376887 AF594) or Alexa Fluor® 647 (sc-376887 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376887 AF680) or Alexa Fluor® 790 (sc-376887 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376887 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SPF30 (G-8) is recommended for detection of SPF30 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).

SPF30 (G-8) 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.

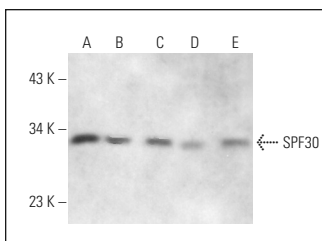
Molecular Weight of SPF30: 30 kDa.

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

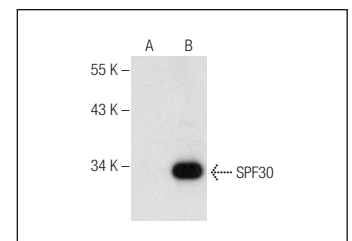
RECOMMENDED SUPPORT REAGENTS

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



SPF30 (G-8): sc-376887. Western blot analysis of SPF30 expression in SJRH30 (A), Jurkat (B), A-431 (C), 3T3-L1 (D) and PC-12 (E) whole cell lysates.



SPF30 (G-8): sc-376887. Western blot analysis of SPF30 expression in non-transfected: sc-110760 (A) and human SPF30 transfected: sc-112339 (B) 293 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.

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