

SFRS15 (G-16): sc-83331

BACKGROUND

Pre-mRNA splicing enhancer elements are short RNA sequences capable of activating weak splice sites in nearby introns that are required for accurate splice site recognition and the control of alternative splicing. Splicing enhancer elements contain specific binding sites for serine/arginine (SR)-rich splicing factors, which include SC35, 9G8, SRp20 and SF2/ASF. The family of SR factors all contain one or more RNA recognition motifs (RRM) and an SR-rich domain. They are not only essential for constitutive splicing, but also regulate splicing in a concentration-dependent manner by influencing the selection of alternative splice sites. Splicing factor arginine/serine-rich 15 (SFRS15), also designated CTD-binding SR-like protein RA4, contains one RRM domain and one SR-rich domain. SFRS15 interacts with C-terminal repetitive domain (CTD) of Pol II and is believed to functionally and physically link transcription and pre-mRNA processing. Localized to the nucleus, SFRS15 is expressed as two isoforms produced by alternative splicing.

REFERENCES

1. Fu, X.D. 1993. Specific commitment of different pre-mRNAs to splicing by single SR proteins. *Nature* 365: 82-85.
2. Yuryev, A., Patturajan, M., Litingtung, Y., Joshi, R.V., Gentile, C., Gebara, M. and Corden, J.L. 1996. The C-terminal domain of the largest subunit of RNA polymerase II interacts with a novel set of serine/arginine-rich proteins. *Proc. Natl. Acad. Sci. USA* 93: 6975-6980.
3. Cáceres, J.F., Sreaton, G.R. and Krainer, A.R. 1998. A specific subset of SR proteins shuttles continuously between the nucleus and the cytoplasm. *Genes Dev.* 12: 55-66.
4. Schaal, T.D. and Maniatis, T. 1999. Selection and characterization of pre-mRNA splicing enhancers: identification of novel SR protein-specific enhancer sequences. *Mol. Cell. Biol.* 19: 1705-1719.
5. Fomenkov, A., Huang, Y.P., Topaloglu, O., Brechman, A., Osada, M., Fomenkova, T., Yuriditsky, E., Trink, B., Sidransky, D. and Ratovitski, E. 2003. p63 α mutations lead to aberrant splicing of keratinocyte growth factor receptor in the Hay-Wells syndrome. *J. Biol. Chem.* 278: 23906-23914.

CHROMOSOMAL LOCATION

Genetic locus: SFRS15 (human) mapping to 21q22.11; Sfrs15 (mouse) mapping to 16 C3.3.

SOURCE

SFRS15 (G-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of SFRS15 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 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83331 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SFRS15 (G-16) is recommended for detection of SFRS15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

SFRS15 (G-16) is also recommended for detection of SFRS15 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SFRS15 siRNA (h): sc-91498, SFRS15 siRNA (m): sc-153403, SFRS15 shRNA Plasmid (h): sc-91498-SH, SFRS15 shRNA Plasmid (m): sc-153403-SH, SFRS15 shRNA (h) Lentiviral Particles: sc-91498-V and SFRS15 shRNA (m) Lentiviral Particles: sc-153403-V.

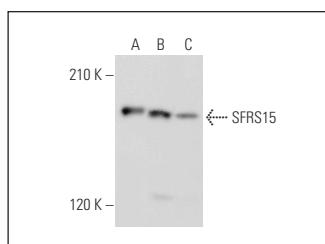
Molecular Weight of SFRS15: 126 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or K-562 whole cell lysate: sc-2203.

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



SFRS15 (G-16): sc-83331. Western blot analysis of SFRS15 expression in Jurkat (A) and HeLa (B) nuclear extracts and K-562 whole cell lysate (C).

RESEARCH USE

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