# SFRS12 (C-16): sc-130264



The Power to Questio

### **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 12 (SFRS12), also designated serine-arginine-rich-splicing regulatory protein 86 (SRrp86) or splicing regulatory protein 508 (SRrp508), contains one RRM and two SR-rich domains separated by an unusual glutamic acid-lysine (EK)-rich region. SFRS12 interacts with all core SR proteins as well as other splicing regulatory proteins, such as SAF-B, hnRNP G, YB-1 and p72. SFRS12 both positively and negatively modulates the activity of the SR proteins and its EK domain can inhibit both constitutive and alternative splicing. SFRS12 also interacts with a lysine-rich zinc finger domain-containing protein p18SRP, which is down-regulated in the brain of Alzheimer's disease (AD) patients.

## **REFERENCES**

- Fu, X.D. 1993. Specific commitment of different pre-mRNAs to splicing by single SR proteins. Nature 365: 82-85.
- Caceres, J.F., et al. 1998. A specific subset of SR proteins shuttles continuously between the nucleus and the cytoplasm. Genes Dev. 12: 55-66.
- Schaal, T.D., et al. 1999. Selection and characterization of pre-mRNA splicing enhancers: identification of novel SR protein-specific enhancer sequences. Mol. Cell. Biol. 19: 1705-1719.
- Cavaloc, Y., et al. 1999. The splicing factors 9G8 and SRp20 transactivate splicing through different and specific enhancers. RNA 5: 468-483.
- Barnard, D.C. and Patton, J.G. 2000. Identification and characterization of a novel serine-arginine-rich splicing regulatory protein. Mol. Cell. Biol. 20: 3049-3057.
- Li, J., Barnard, D.C. and Patton, J.G. 2002. A unique glutamic acid-lysine (EK) domain acts as a splicing inhibitor. J. Biol. Chem. 277: 39485-39492.
- Barnard, D.C., Li, J., Peng, R. and Patton, J.G. 2002. Regulation of alternative splicing by SRrp86 through coactivation and repression of specific SR proteins. RNA 8: 526-533.
- 8. Zhang, D.L., Sun, X.J., Ling, L.J., Chen, R.S. and Ma, D.L. 2002. Molecular cloning, characterization, chromosomal assignment, genomic organization and verification of SFRS12(SRrp508), a novel member of human SR protein superfamily and a human homolog of rat SRrp86. Yi Chuan Xue Bao 29: 377-383.
- 9. Li, J., Hawkins, I.C., Harvey, C.D., Jennings, J.L., Link, A.J. and Patton, J.G. 2003. Regulation of alternative splicing by SRrp86 and its interacting proteins. Mol. Cell. Biol. 23: 7437-7447.

## **CHROMOSOMAL LOCATION**

Genetic locus: SFRS12 (human) mapping to 5q12.3.

#### **SOURCE**

SFRS12 (C-16) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of SFRS12 of human origin.

### **PRODUCT**

Each vial contains 100  $\mu g$  lgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

### **APPLICATIONS**

SFRS12 (C-16) is recommended for detection of SFRS12 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

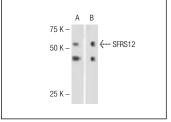
Suitable for use as control antibody for SFRS12 siRNA (h): sc-91849, SFRS12 shRNA Plasmid (h): sc-91849-SH and SFRS12 shRNA (h) Lentiviral Particles: sc-91849-V.

Molecular Weight of SFRS12: 86 kDa.

### **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).

#### **DATA**



SFRS12 (C-16): sc-130264. Western blot analysis of SFRS12 expression in Jurkat (**A**) and SK-BR-3 (**B**) 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.