SANTA CRUZ BIOTECHNOLOGY, INC.

SC35 (E-16): sc-10252

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 arginine/serine (RS)-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. The majority of SR proteins, including SC35 and SRp40, are confined to the nucleus, while SF2/ASF, SRp20 and 9G8 are continuously shuttled between the nucleus and the cytoplasm and contribute to mRNA transport. The activity of SR proteins in regulated splicing is antagonized by members of the hnRNP A/B family of proteins, which induce drastic shifts in the selection of splicing sites. An additional SR-associated protein, p32, tightly associates with SR factors and preferentially inhibits SF2/ASF functioning as both a splicing enhancer and splicing repressor protein by preventing the stable interaction of SF2/ASF and RNA.

REFERENCES

1. Fu, X.D. 1993. Specific commitment of different pre-mRNAs to splicing by single SR proteins. Nature 365: 82-85.
2. Mayeda, A., et al. 1994. Function of conserved domains of hnRNP A1 and other hnRNP A/B proteins. EMBO J. 13: 5483-5495.
3. Jumaa, H., et al. 1997. The splicing factor SRp20 modifies splicing of its own mRNA and ASF/SF2 antagonizes this regulation. EMBO J. 16: 5077-5085.
4. 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.
5. Cavaloc, Y., et al. 1999. The splicing factors 9G8 and SRp20 transactivate splicing through different and specific enhancers. RNA 5: 468-483.

CHROMOSOMAL LOCATION

Genetic locus: SFRS2 (human) mapping to 17q25.2; Sfrs2 (mouse) mapping to 11 E2.

SOURCE

SC35 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SC35 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.

Blocking peptide available for competition studies, sc-10252 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SC35 (E-16) is recommended for detection of SC35 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).

SC35 (E-16) is also recommended for detection of SC35 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for SC35 siRNA (h): sc-38317, SC35 siRNA (m): sc-38318, SC35 shRNA Plasmid (h): sc-38317-SH, SC35 shRNA Plasmid (m): sc-38318-SH, SC35 shRNA (h) Lentiviral Particles: sc-38317-V and SC35 shRNA (m) Lentiviral Particles: sc-38318-V.

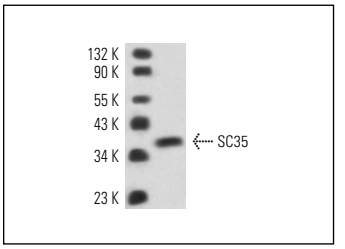
Molecular Weight of SC35: 35 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

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



SC35 (E-16): sc-10252. Western blot analysis of SC35 expression in HeLa nuclear extract.

SELECT PRODUCT CITATIONS

1. Hatakeyama, S., et al. 2009. Identification of mRNA splicing factors as the endothelial receptor for carbohydrate-dependent lung colonization of cancer cells. Proc. Natl. Acad. Sci. USA 106: 3095-3100.

RESEARCH USE

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