SANTA CRUZ BIOTECHNOLOGY, INC.

SRp55 (D-14): sc-34197

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pre-mRNA splicing is a critical step in the posttranscriptional regulation of gene expression. Several protein complexes are involved in proper mRNA splicing and transport. Serine/arginine-rich (SR) proteins SRp55, SRp30c and HtrA2β1 regulate exon 2 and 10 splicing. The first two inhibit both exons and SRp55 also plays a role in exon inclusion after the removal of intronic splicing silencer sequences. SRp55 plays a major role in maintaining normal FGFR1 α-exon inclusion.

REFERENCES

1. Ring, H.Z., et al. 1994. The SR protein B52/SRp55 is essential for *Drosophila* development. Mol. Cell. Biol. 14: 7499-7506.
2. Nagel, R.J., et al. 1998. Specific binding of an exonic splicing enhancer by the pre-mRNA splicing factor SRp55. RNA 4: 11-23.
3. Lemaire, R., et al. 1999. SF2 and SRp55 regulation of CD45 exon 4 skipping during T cell activation. Eur. J. Immunol. 29: 823-837.
4. Tran, Q., et al. 2003. SRp55 is a regulator of calcitonin/CGRP alternative RNA splicing. Biochemistry 42: 951-957.
5. Tran, Q., et al. 2003. Human transformer 2β and SRp55 interact with a calcitonin-specific splice enhancer. Biochim. Biophys. Acta 1625: 141-152.
6. Lai, M.C., et al. 2003. Differential effects of hyperphosphorylation on splicing factor SRp55. Biochem. J. 371: 937-945.
7. Jin, W., et al. 2004. Enhancer-dependent splicing of FGFR1 α-exon is repressed by RNA interference-mediated down-regulation of SRp55. Cancer Res. 64: 8901-8905.
8. Yu, Q., et al. 2004. A minimal length between Tau exon 10 and 11 is required for correct splicing of exon 10. J. Neurochem. 90: 164-172.

CHROMOSOMAL LOCATION

Genetic locus: SRSF6 (human) mapping to 20q13.11, SRSF5 (human) mapping to 14q24.2; Srsf6 (mouse) mapping to 2 H2, Srsf5 (mouse) mapping to 12 D1.

SOURCE

SRp55 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within RNA binding domain 1 near the N-terminus of SRp55 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-34197 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

SRp55 (D-14) is recommended for detection of SRp55 and, to a lesser extent, SRp40 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).

SRp55 (D-14) is also recommended for detection of SRp55 and, to a lesser extent, SRp40 in additional species, including bovine, porcine and avian.

Molecular Weight of unphosphorylated SRp55: 40 kDa.

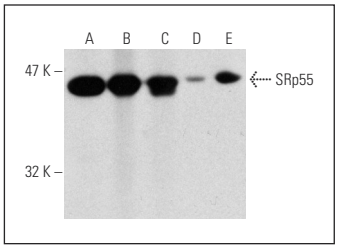
Molecular Weight of phosphorylated SRp55: 55 kDa.

Positive Controls: CCRF-CEM nuclear extract: sc-2146, K-562 nuclear extract: sc-2130 or HL-60 nuclear extract: sc-2147.

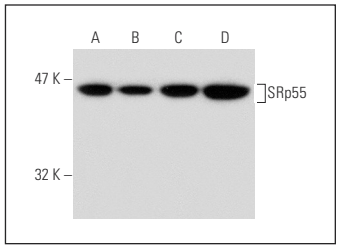
RECOMMENDED SECONDARY REAGENTS

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



SRp55 (D-14): sc-34197. Western blot analysis of SRp55 expression in human PBL (**A**), rat PBL (**B**) and mouse PBL (**C**) whole cell lysates and HeLa (**D**) and CCRF-CEM (**E**) nuclear extracts.



SRp55 (D-14): sc-34197. Western blot analysis of SRp55 expression in PC-3 (**A**), K-562 (**B**), HL-60 (**C**) and CCRF-CEM (**D**) nuclear extracts.

RESEARCH USE

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