SANTA CRUZ BIOTECHNOLOGY, INC.

p-SC35 (SC-35): sc-53518

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 ASF/SF2 functioning as both a splicing enhancer and splicing repressor protein by preventing the stable interaction of ASF/SF2 and RNA.

REFERENCE

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.

CHROMOSOMAL LOCATION

Genetic locus: SRSF2 (human) mapping to 17q25.1; Srsf2 (mouse) mapping to 11 E2.

SOURCE

p-SC35 (SC-35) is a mouse monoclonal antibody raised against partially purified mammalian spliceosomes.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-SC35 (SC-35) is available conjugated to agarose (sc-53518 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53518 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53518 PE), fluorescein (sc-53518 FITC), Alexa Fluor® 488 (sc-53518 AF488), Alexa Fluor® 546 (sc-53518 AF546), Alexa Fluor® 594 (sc-53518 AF594) or Alexa Fluor® 647 (sc-53518 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53518 AF680) or Alexa Fluor® 790 (sc-53518 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

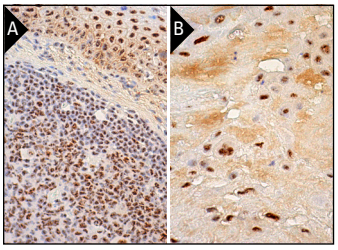
APPLICATIONS

p-SC35 (SC-35) is recommended for detection of a phosphoepitope of factor SC35 of mouse, rat, human, *Drosophila melanogaster* and *Xenopus laevis* 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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 p-SC35: 35 kDa.

DATA



p-SC35 (SC-35): sc-53518. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear speckle staining of cells in germinal center, cells in non-germinal center and squamous epithelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear speckle staining of decidual cells (**B**).

SELECT PRODUCT CITATIONS

1. Cataldi, A., et al. 2009. Effect of hypoxia and aging on PKC δ-mediated SC-35 phosphorylation in rat myocardial tissue. Anat. Rec. 292: 1135-1142.
2. Gu, B., et al. 2013. CTD serine-2 plays a critical role in splicing and termination factor recruitment to RNA polymerase II *in vivo*. Nucleic Acids Res. 41: 1591-1603.
3. Neueder, A., et al. 2018. Regulatory mechanisms of incomplete Huntingtin mRNA splicing. Nat. Commun. 9: 3955.
4. Shim, M.S., et al. 2019. The autophagic protein LC3 translocates to the nucleus and localizes in the nucleolus associated to NUFIP1 in response to cyclic mechanical stress. Autophagy 16: 1-14.
5. Ka, H.I., et al. 2020. Deubiquitinase USP47-stabilized splicing factor IK regulates the splicing of ATM pre-mRNA. Cell Death Discov. 6: 34.
6. Han, D., et al. 2022. Dynamic assembly of the mRNA m6A methyltransferase complex is regulated by METTL3 phase separation. PLoS Biol. 20: e3001535.

RESEARCH USE

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