SANTA CRUZ BIOTECHNOLOGY, INC.

SRPK1 (EE-13): sc-100443

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Arginine/serine-rich (RS) domain-containing proteins and their phosphorylation by specific protein kinases constitute control circuits to regulate both constitutive and alternative pre-mRNA splicing and coordinate splicing with transcription in cells. Two SR protein-specific kinases (SRPK, also designated SFRSK), SRPK1 and SRPK2, are highly specific for the phosphorylation of these RS proteins, thereby contributing to splicing regulation. SRPK1 plays a role in the condensation of sperm chromatin. SRPK2 has a stringent preference for SR dipeptides and contains a proline-rich sequence at its amino terminus. Both SRPK1 and SRPK2 are highly expresed in testes. SRPK1 is found exclusively in pancreas and SRPK2 is found exclusively in brain and lung.

CHROMOSOMAL LOCATION

Genetic locus: SRPK1 (human) mapping to 6p21.31.

SOURCE

SRPK1 (EE-13) is a mouse monoclonal antibody raised against recombinant SRPK1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SRPK1 (EE-13) is recommended for detection of SRPK1 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SRPK1 siRNA (h): sc-39235, SRPK1 shRNA Plasmid (h): sc-39235-SH and SRPK1 shRNA (h) Lentiviral Particles: sc-39235-V.

Molecular Weight of SRPK1: 106 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285 or IMR-32 cell lysate: sc-2409.

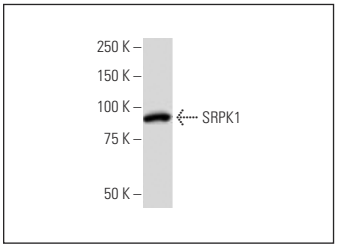
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

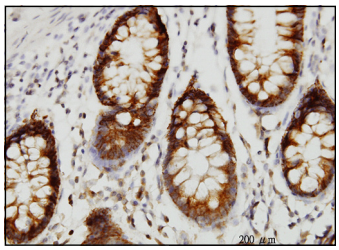
STORAGE

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

DATA



SRPK1 (EE-13): sc-100443. Western blot analysis of SRPK1 expression in IMR-32 whole cell lysate.



SRPK1 (EE-13): sc-100443. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Prattapong, P., et al. 2020. CRISPR/Cas9-mediated double knockout of SRPK1 and SRPK2 in a nasopharyngeal carcinoma cell line. Cancer Rep. 3: e1224.
2. Belali, T., et al. 2020. WT1 activates transcription of the splice factor kinase SRPK1 gene in PC3 and K562 cancer cells in the absence of corepressor BASP1. Biochim. Biophys. Acta Gene Regul. Mech. 1863: 194642.
3. Dong, Z., et al. 2022. Increased expression of SRPK1 (serine/arginine-rich protein-specific kinase 1) is associated with progression and unfavorable prognosis in cervical squamous cell carcinoma. Bioengineered 13: 6100-6112.
4. Sun, M., et al. 2022. SR protein kinases regulate the splicing of cardiomyopathy-relevant genes via phosphorylation of the RSRSP stretch in RBM20. Genes 13: 1526.
5. Wodi, C., et al. 2023. SPHINX-based combination therapy as a potential novel treatment strategy for acute myeloid leukaemia. Br. J. Biomed. Sci. 80: 11041.
6. Tsoi, H., et al. 2023. SRSF5 regulates the expression of BQ323636.1 to modulate tamoxifen resistance in ER-positive breast cancer. Cancers 15: 2271.
7. Wang, A., et al. 2024. N^6-methyladenosine-modified SRPK1 promotes aerobic glycolysis of lung adenocarcinoma via PKM splicing. Cell. Mol. Biol. Lett. 29: 106.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.