

SRPK2 (23): sc-136078

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. SRPK1 is expressed as two alternatively spliced isoforms, one of which is localized specifically to testis and the other of which shares a similar localization pattern to SRPK2 and is present in brain, heart, liver and lung.

REFERENCES

1. Wang, H.Y., et al. 1998. SRPK2: a differentially expressed SR protein-specific kinase involved in mediating the interaction and localization of pre-mRNA splicing factors in mammalian cells. *J. Cell Biol.* 140: 737-750.
2. Kuroyanagi, N., et al. 1998. Novel SR-protein-specific kinase, SRPK2, disassembles nuclear speckles. *Biochem. Biophys. Res. Commun.* 242: 357-364.
3. Papoutsopoulou, S., et al. 1999. SR protein-specific kinase 1 is highly expressed in testis and phosphorylates Protamine 1. *Nucleic Acids Res.* 27: 2972-2980.
4. Wang, H.Y., et al. 1999. Localization of serine kinases, SRPK1 (SFRSK1) and SRPK2 (SFRSK2), specific for the SR family of splicing factors in mouse and human chromosomes. *Genomics* 57: 310-315.
5. Tang, Z., et al. 2000. Biochemical and genetic conservation of fission yeast Dsk1 and human SR protein-specific kinase 1. *Mol. Cell. Biol.* 20: 816-824.

CHROMOSOMAL LOCATION

Genetic locus: SRPK2 (human) mapping to 7q22.3; *Srpk2* (mouse) mapping to 5 A3.

SOURCE

SRPK2 (23) is a mouse monoclonal antibody raised against amino acids 363-485 of SRPK2 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

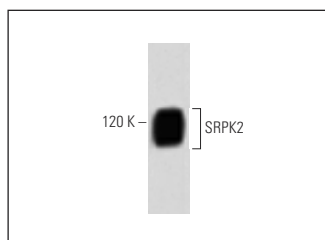
SRPK2 (23) is recommended for detection of SRPK2 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for SRPK2 siRNA (h): sc-39237, SRPK2 siRNA (m): sc-39238, SRPK2 siRNA (r): sc-270185, SRPK2 shRNA Plasmid (h): sc-39237-SH, SRPK2 shRNA Plasmid (m): sc-39238-SH, SRPK2 shRNA Plasmid (r): sc-270185-SH, SRPK2 shRNA (h) Lentiviral Particles: sc-39237-V, SRPK2 shRNA (m) Lentiviral Particles: sc-39238-V and SRPK2 shRNA (r) Lentiviral Particles: sc-270185-V.

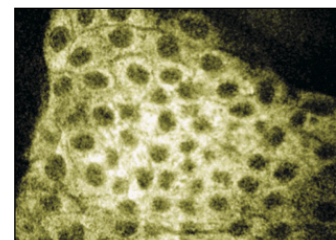
Molecular Weight of SRPK2: 120 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, mouse brain extract: sc-2253 or mouse testis extract: sc-2405.

DATA



SRPK2 (23): sc-136078. Western blot analysis of SRPK2 expression in A-431 whole cell lysate.



SRPK2 (23): sc-136078. Immunofluorescence staining of MDCK cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Edmond, V., et al. 2011. SRSF2 is required for sodium butyrate-mediated p21^{WAF1} induction and premature senescence in human lung carcinoma cell lines. *Cell Cycle* 10: 1968-1977.
2. Prattapong, P., et al. 2020. CRISPR/Cas9-mediated double knockout of SRPK1 and SRPK2 in a nasopharyngeal carcinoma cell line. *Cancer Rep.* 3: e1224.
3. Lei, K., et al. 2021. C/EBPβ/AEP signaling regulates the oxidative stress in malignant cancers, stimulating the metastasis. *Mol. Cancer Ther.* 20: 1640-1652.
4. Müller, J.A., et al. 2022. A presynaptic phosphosignaling hub for lasting homeostatic plasticity. *Cell Rep.* 39: 110696.

RESEARCH USE

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