SANTA CRUZ BIOTECHNOLOGY, INC.

SRPK (D-7): sc-398432

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. SRPK3 is expressed in the heart and in skeletal muscle.

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.

SOURCE

SRPK (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 530-547 within an internal region of SRPK1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SRPK (D-7) is available conjugated to agarose (sc-398432 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398432 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398432 PE), fluorescein (sc-398432 FITC), Alexa Fluor® 488 (sc-398432 AF488), Alexa Fluor® 546 (sc-398432 AF546), Alexa Fluor® 594 (sc-398432 AF594) or Alexa Fluor® 647 (sc-398432 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398432 AF680) or Alexa Fluor® 790 (sc-398432 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398432 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

SRPK (D-7) is recommended for detection of SRPK1, SRPK2 and SRPK3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

SRPK (D-7) is also recommended for detection of SRPK1, SRPK2 and SRPK3 in additional species, including equine, canine, bovine, porcine and avian.

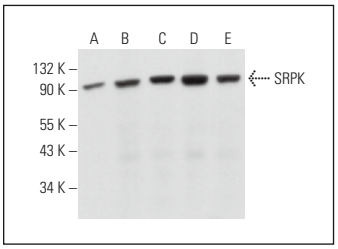
Molecular Weight of SRPK: 82 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

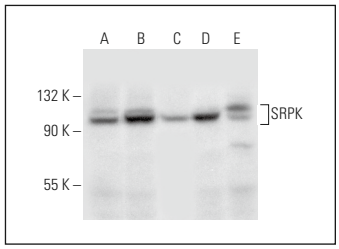
RECOMMENDED SUPPORT REAGENTS

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.

DATA



SRPK (D-7): sc-398432. Western blot analysis of SRPK expression in MIA PaCa-2 (**A**), K-562 (**B**), RT-4 (**C**), NIH/3T3 (**D**) and C6 (**E**) whole cell lysates.



SRPK (D-7): sc-398432. Western blot analysis of SRPK expression in HeLa (**A**), MIA PaCa-2 (**B**), IMR-32 (**C**), Hep G2 (**D**) and Jurkat (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hetz, R., et al. 2022. Excessive inorganic phosphate burden perturbed intracellular signaling: quantitative proteomics and phosphoproteomics analyses. Front. Nutr. 8: 765391.

STORAGE

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

RESEARCH USE

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