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KO-Validated Anti-SRPK2 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2420

Specification

KO-Validated Anti-SRPK2 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	P78362
Reactivity	**Rat, Human**
Clonality	**Monoclonal**
Isotype	**Mouse IgG2a**
Calculated MW	**Predicted, 78 kDa; observed, 125kDa KDa**
Gene Name	**SRPK2**
Aliases	**SRPK2; SRSF Protein Kinase 2; SFRS Protein Kinase 2; SFRSK2; Serine/Arginine-Rich Protein-Specific Kinase 2; Serine/Arginine-Rich Splicing Factor Kinase 2; SR-Protein-Specific Kinase 2; SR Protein Kinase 2; EC 2.7.11.1; Serine/Threonine-Protein Kinase SRPK2; Serine Kinase SRPK2**
Immunogen	**Recombinant protein of human SRPK2**

KO-Validated Anti-SRPK2 Mouse Monoclonal Antibody - Additional Information

Gene ID	**6733**

Other Names
SRSF protein kinase 2, 2.7.11.1, SFRS protein kinase 2, Serine/arginine-rich protein-specific kinase 2, SR-protein-specific kinase 2, SRSF protein kinase 2 N-terminal, SRSF protein kinase 2 C-terminal, SRPK2 {ECO:0000312|EMBL:AAH68547.1}

KO-Validated Anti-SRPK2 Mouse Monoclonal Antibody - Protein Information

Name SRPK2 {ECO:0000312|EMBL:AAH68547.1}

Function
Serine/arginine-rich protein-specific kinase which specifically phosphorylates its substrates at serine residues located in regions rich in arginine/serine dipeptides, known as RS domains and is involved in the phosphorylation of SR splicing factors and the regulation of splicing (PubMed:18559500, PubMed:21056976, PubMed:9472028). Promotes neuronal apoptosis by up-regulating cyclin-D1 (CCND1) expression (PubMed:19592491). This is done by the phosphorylation of SRSF2, leading to the suppression of p53/TP53 phosphorylation thereby relieving the repressive effect of p53/TP53 on cyclin-D1 (CCND1) expression (PubMed:21205200). Phosphorylates ACIN1, and redistributes it from the nuclear speckles to the nucleoplasm, resulting

in cyclin A1 but not cyclin A2 up-regulation (PubMed:18559500). Plays an essential role in spliceosomal B complex formation via the phosphorylation of DDX23/PRP28 (PubMed:18425142). Probably by phosphorylating DDX23, leads to the suppression of incorrect R-loops formed during transcription; R-loops are composed of a DNA:RNA hybrid and the associated non-template single-stranded DNA (PubMed:28076779). Can mediate hepatitis B virus (HBV) core protein phosphorylation (PubMed:12134018). Plays a negative role in the regulation of HBV replication through a mechanism not involving the phosphorylation of the core protein but by reducing the packaging efficiency of the pregenomic RNA (pgRNA) without affecting the formation of the viral core particles (PubMed:16122776).

Cellular Location
Cytoplasm. Nucleus, nucleoplasm. Nucleus speckle. Chromosome. Note=Shuttles between the nucleus and the cytoplasm (PubMed:19592491, PubMed:21056976, PubMed:21157427) KAT5/TIP60 inhibits its nuclear translocation (PubMed:21157427) Phosphorylation at Thr-492 by PKB/AKT1 promotes nuclear translocation (PubMed:19592491). Preferentially localizes across the entire gene coding region (PubMed:28076779). During transcription, accumulates at chromatin loci where unscheduled R-loops form and colocalizes with paused 'Ser-5'-phosphorylated POLR2A/RNA polymerase II and helicase DDX23 (PubMed:28076779).

Tissue Location
Highly expressed in brain, moderately expressed in heart and skeletal muscle and at low levels in lung, liver, and kidney

KO-Validated Anti-SRPK2 Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KO-Validated Anti-SRPK2 Mouse Monoclonal Antibody - Images

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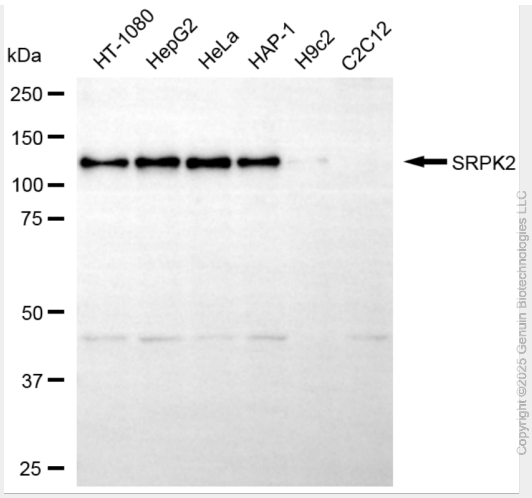
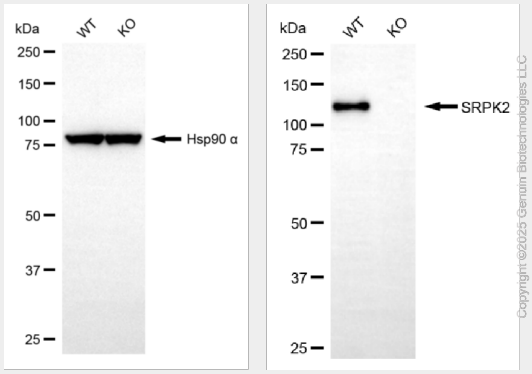
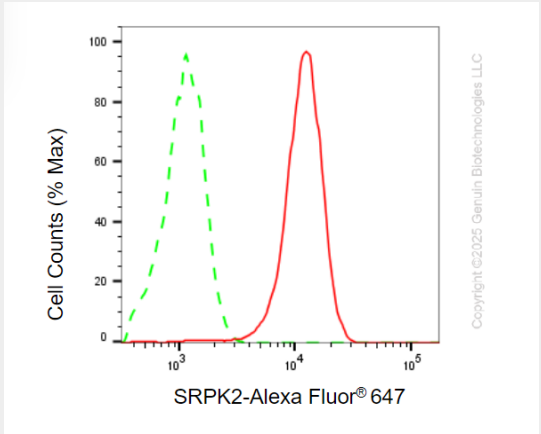


Western blotting analysis using anti-SRPK2 antibody (Cat#AGI2420). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-SRPK2 antibody (Cat#AGI2420, 1:1,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-SRPK2 antibody (Cat#AGI2420). SRPK2 expression in wild type (WT) and SRPK2 knockout (KO) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-SRPK2 antibody (Cat#AGI2420, 1:1,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of SRPK2 expression in HepG2 cells using anti-SRPK2 antibody (Cat#AGI2420, 1:2,000). Green, isotype control; red, SRPK2.