SANTA CRUZ BIOTECHNOLOGY, INC.

Septin 5 (SP19): sc-65511



BACKGROUND

The septins are a family of GTPase enzymes, some of which are required for cytokinesis and others of which are associated with exocytosis. Members of the septin family can form heteropolymer complexes and also play a role in the organization of new growth in organisms. The transcriptional regulation of all septins is complex, resulting in alternatively spliced variants. At least three septins (Septin 1, 2 and 4) are associated with a τ -based paired helical filament core and may contribute to the formation of neurofibrillary tangle as integral constituents of paired helical filaments. The human SEPT4 (H5/PNUTL2/CDCREL-2) gene encodes ARTS (for apoptosis-related protein in the TGF- β signaling pathway), which is expressed in many cells and acts to enhance cell death induced by TGF- β or, to a lesser extent, by other apoptotic agents. ARTS is localized to mitochondria and translocates to the nucleus when apoptosis occurs. Septin 5 is a major form of the CDCREL-1 septin in the adult neocortex of mammals.

REFERENCES

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- 2. Xue, J., et al. 2000. Phosphorylation of a new brain-specific septin, G-Septin, by cGMP-dependent protein kinase. J. Biol. Chem. 275: 10047-10056.
- Larisch, S., et al. 2000. A novel mitochondrial septin-like protein, ARTS, mediates apoptosis dependent on its P-loop motif. Nat. Cell Biol. 2: 915-921.
- Toda, S., et al. 2000. Reciprocal expression of infant- and adult-preferring transcripts of CDCREL-1 septin gene in the rat neocortex. Biochem. Biophys. Res. Commun. 273: 723-728.
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- Borkhardt, A., et al. 2001. An ins(X;11)(q24;q23) fuses the MLL and the Septin 6/KIAA0128 gene in an infant with AML-M2. Genes Chromosomes Cancer 32: 82-88.
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CHROMOSOMAL LOCATION

Genetic locus: SEPT5 (human) mapping to 22q11.21; Sept5 (mouse) mapping to 16 A3.

SOURCE

Septin 5 (SP19) is a mouse monoclonal antibody raised against a crude fraction of human schizophrenic brain homogenate immuoprecipitated using a SYP antibody.

PRODUCT

Each vial contains 200 μ g lgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Septin 5 (SP19) is recommended for detection of Septin 5 of mouse, rat and 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Septin 5 siRNA (h): sc-36478, Septin 5 siRNA (m): sc-36479, Septin 5 shRNA Plasmid (h): sc-36478-SH, Septin 5 shRNA Plasmid (m): sc-36479-SH, Septin 5 shRNA (h) Lentiviral Particles: sc-36478-V and Septin 5 shRNA (m) Lentiviral Particles: sc-36479-V.

Molecular Weight of Septin 5: 40 kDa.

Positive Controls: NRK whole cell lysate: sc-364197, IMR-32 cell lysate: sc-2409 or K-562 whole cell lysate: sc-2203.

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





Septin 5 (SP19): sc-65511. Western blot analysis of Septin 5 expression in IMR-32 (**A**), SK-BR-3 (**B**), NRK (**C**), C6 (**D**) and H19-7/IGF-IR (**E**) whole cell lysates. Septin 5 (SP19): sc-65511. Western blot analysis of Septin 5 expression in HeLa (**A**), K-562 (**B**) and HCT-116 (**C**) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

STORAGE

Store at 4° C, **D0 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.

PROTOCOLS

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