SANTA CRUZ BIOTECHNOLOGY, INC.

Septin 10 (C-3): sc-365776

The Power to Question

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. Septin 10, a 517 residue polypeptide which localizes to the cytoplasm and nucleus, shares closest homology to Septin 6 and Septin 8. Septin 10 is expressed ubiquitously, though most abundantly in the placenta, lung, kidney, heart, skeletal muscles, liver and various tumor cell lines. Like other Septin family members, Septin 10 displays GTP-binding and GTPase activity. Additionally, Septin 10 is potentially involved in cytokinesis. Upon maturation induced by lipopolysaccharide (LPS), dendritic cells express upregulated amounts of Septin 10.

REFERENCES

1. Cooper, J.A. and Kiehart, D.P. 1996. Septins may form a ubiquitous family of cytoskeletal filaments. J. Cell Biol. 134: 1345-1348.
2. Trimble, W.S. 1999. Septins: a highly conserved family of membrane-associated GTPases with functions in cell division and beyond. J. Membr. Biol. 169: 75-81.
3. Kinoshita, M. and Noda, M. 2001. Roles of septins in the mammalian cytokinesis machinery. Cell Struct. Funct. 26: 667-670.
4. Bläser, S., et al. 2002. Human Septin-Septin interaction: CDCrel-1 partners with KIAA0202. FEBS Lett. 519: 169-172.
5. Sui, L., et al. 2003. Cloning and functional characterization of human Septin 10, a novel member of septin family cloned from dendritic cells. Biochem. Biophys. Res. Commun. 304: 393-398.
6. Joo, E., et al. 2005. Septins: traffic control at the cytokinesis intersection. Traffic 6: 626-634.

CHROMOSOMAL LOCATION

Genetic locus: SEPT10 (human) mapping to 2q13.

SOURCE

Septin 10 (C-3) is a mouse monoclonal antibody raised against amino acids 1-45 mapping at the N-terminus of Septin 10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 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

Septin 10 (C-3) is recommended for detection of Septin 10 isoforms 1 and 2 of 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), 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 Septin 10 siRNA (h): sc-61528, Septin 10 shRNA Plasmid (h): sc-61528-SH and Septin 10 shRNA (h) Lentiviral Particles: sc-61528-V.

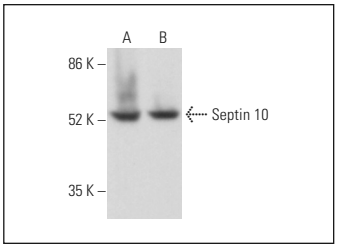
Molecular Weight of Septin 10: 53 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, A549 cell lysate: sc-2413 or HeLa whole cell lysate: sc-2200.

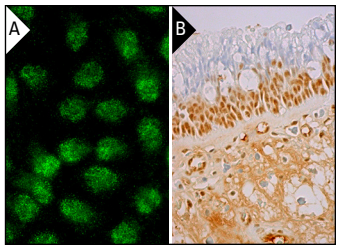
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Septin 10 (C-3): sc-365776. Western blot analysis of Septin 10 expression in Caki-1 (**A**) and HeLa (**B**) whole cell lysates.



Septin 10 (C-3): sc-365776. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear staining of respiratory epithelial cells (**B**).

RESEARCH USE

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