

Septin (E-4): sc-271670

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 6 is a widely expressed cytoplasmic protein that contains an ATP-GTP binding motif and three nuclear targeting sequences in its C-terminus. Septin 8 interacts with both Septin 5 and cell division cycle related-1 (CDCrel-1), and may play an important role in the functional regulation of hPFTAIRE1, a member of the Cdc2-related kinase family that is localized to the cytoplasm. Like other septin family members, Septin 10, Septin 11 and Septin 14 display GTP-binding and GTPase activity and are suggested to play a role in cytokinesis.

REFERENCES

1. 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.
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.
3. Kinoshita, M. 2003. Assembly of mammalian septins. *J. Biochem.* 134: 491-496.
4. Hanai, N., et al. 2004. Biochemical and cell biological characterization of a mammalian Septin, Sept11. *FEBS Lett.* 568: 83-88.
5. Hall, P.A., et al. 2005. Expression profiling the human Septin gene family. *J. Pathol.* 206: 269-278.
6. Bläser, S., et al. 2006. Human endothelial cell septins: SEPT11 is an interaction partner of SEPT5. *J. Pathol.* 210: 103-110.
7. Mostowy, S., et al. 2009. Septin 11 restricts InIB-mediated invasion by *Listeria*. *J. Biol. Chem.* 284: 11613-11621.

SOURCE

Septin (E-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Septin 11 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Septin (E-4) is available conjugated to agarose (sc-271670 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271670 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271670 PE), fluorescein (sc-271670 FITC), Alexa Fluor[®] 488 (sc-271670 AF488), Alexa Fluor[®] 546 (sc-271670 AF546), Alexa Fluor[®] 594 (sc-271670 AF594) or Alexa Fluor[®] 647 (sc-271670 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271670 AF680) or Alexa Fluor[®] 790 (sc-271670 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Septin (E-4) is recommended for detection of Septin 6, 8, 10, 11 and 14 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).

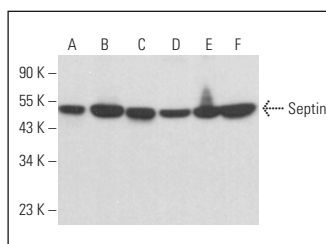
Molecular Weight of Septin: 40-65 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, HeLa whole cell lysate: sc-2200 or rat brain extract: sc-2392.

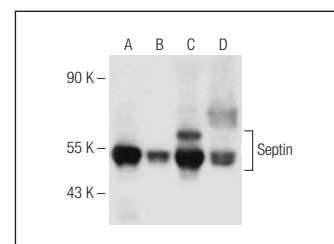
RECOMMENDED SUPPORT REAGENTS

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 (E-4): sc-271670. Western blot analysis of Septin expression in MOLT-4 (A), ALL-SIL (B), RAW 264.7 (C), U266 (D), IMR-32 (E) and A-10 (F) whole cell lysates.



Septin (E-4): sc-271670. Western blot analysis of Septin expression in NTERA-2 cl.D1 (A) and HeLa (B) whole cell lysates and rat brain (C) and mouse testis (D) tissue extracts.

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.

PROTOCOLS

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