

Septin 1 (E-13): sc-20406

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 Tau-based paired helical filament core and may contribute to the formation of neurofibrillary tangle as integral constituents of paired helical filaments. Septin 3 (G-Septin), a GTP-binding protein, is highly expressed in brain and is regulated by protein kinase G in neurons. 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. Human Septin 6 protein contains an ATP-GTP binding motif and three nuclear targeting sequences in its C-terminus. Septin 6 is the third septin member that is fused to the MLL protein, in addition to hCDCREL and MSF.

REFERENCES

1. Kinoshita, A., et al. 1998. Identification of septins in neurofibrillary tangles in Alzheimer's disease. *Am. J. Pathol.* 153: 1551-1560.
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. 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.
4. 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.
5. Jackisch, B.O., et al. 2000. Alternative exon usage of rat septins. *Biochem. Biophys. Res. Commun.* 275: 180-188.

CHROMOSOMAL LOCATION

Genetic locus: SEPT1 (human) mapping to 16p11.2; Sept1 (mouse) mapping to 7 F3.

SOURCE

Septin 1 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Septin 1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-20406 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Septin 1 (E-13) is recommended for detection of septin 1 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

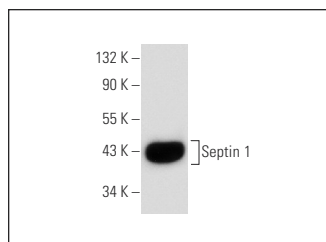
Septin 1 (E-13) is also recommended for detection of septin 1 in additional species, including bovine.

Suitable for use as control antibody for Septin 1 siRNA (h): sc-36472, Septin 1 siRNA (m): sc-36473, Septin 1 shRNA Plasmid (h): sc-36472-SH, Septin 1 shRNA Plasmid (m): sc-36473-SH, Septin 1 shRNA (h) Lentiviral Particles: sc-36472-V and Septin 1 shRNA (m) Lentiviral Particles: sc-36473-V.

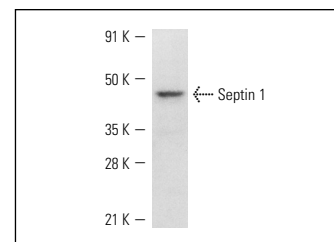
Molecular Weight of Septin 1: 46 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or MCF7 whole cell lysate: sc-2206.

DATA



Septin 1 (E-13): sc-20406. Western blot analysis of Septin 1 expression in MCF7 whole cell lysate.



Septin 1 (E-13): sc-20406. Western blot analysis of Septin 1 expression in Jurkat whole cell lysate.

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 or our catalog for detailed protocols and support products.



Try **Septin 1 (H-10): sc-373925** or **Septin 1 (B-8): sc-398586**, our highly recommended monoclonal alternatives to Septin 1 (E-13).