

Septin 5 (E-10): sc-373903

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.

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.
6. Momany, M., et al. 2001. Characterization of the *Aspergillus nidulans* Septin (asp) gene family. *Genetics* 157: 969-977.

CHROMOSOMAL LOCATION

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

SOURCE

Septin 5 (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 313-345 near the C-terminus of Septin 5 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-373903 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Septin 5 (E-10) is recommended for detection of Septin 5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 5 (E-10) is also recommended for detection of Septin 5 in additional species, including canine, bovine and porcine.

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.

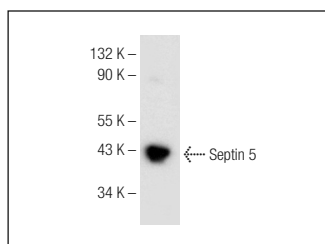
Molecular Weight of Septin 5: 40 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, SH-SY5Y cell lysate: sc-3812 or mouse brain extract: sc-2253.

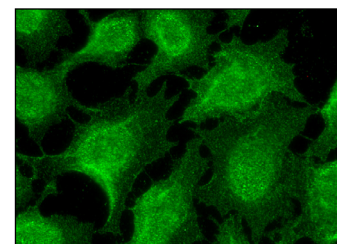
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 (E-10): sc-373903. Western blot analysis of Septin 5 expression in mouse brain tissue extract.



Septin 5 (E-10): sc-373903. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and membrane localization.

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.