

Septin 1 (H-10): sc-373925

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.

CHROMOSOMAL LOCATION

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

SOURCE

Septin 1 (H-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 224-251 within an internal region of Septin 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Septin 1 (H-10) is available conjugated to agarose (sc-373925 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373925 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373925 PE), fluorescein (sc-373925 FITC), Alexa Fluor[®] 488 (sc-373925 AF488), Alexa Fluor[®] 546 (sc-373925 AF546), Alexa Fluor[®] 594 (sc-373925 AF594) or Alexa Fluor[®] 647 (sc-373925 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373925 AF680) or Alexa Fluor[®] 790 (sc-373925 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373925 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Septin 1 (H-10) is recommended for detection of Septin 1 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).

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.

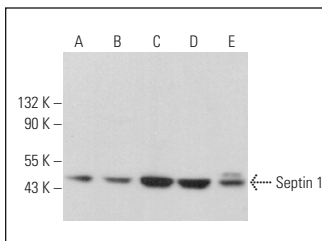
Molecular Weight of Septin 1: 46 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, NAMALWA cell lysate: sc-2234 or Raji whole cell lysate: sc-364236.

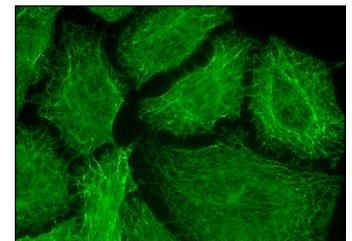
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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 1 (H-10): sc-373925. Western blot analysis of Septin 1 expression in NAMALWA (A), Jurkat (B), HL-60 (C), Raji (D) and MCF7 (E) whole cell lysates.



Septin 1 (H-10): sc-373925. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

1. Langer, H.T., et al. 2021. A mutation in Desmin makes skeletal muscle less vulnerable to acute muscle damage after eccentric loading in rats. *FASEB J.* 35: e21860.

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.