

# Septin 7 (H-120): sc-20620

## 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/CDCrREL-2) gene encodes ARTS (for apoptosis-related protein in the TGF $\beta$  signaling pathway), which is expressed in many cells and acts to enhance cell death induced by TGF $\beta$  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 members 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.

## SOURCE

Septin 7 (H-120) is a rabbit polyclonal antibody raised against amino acids 299-418 of Septin 7 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Septin 7 (H-120) is recommended for detection of septin 7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2  $\mu$ g per 100–500  $\mu$ g 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).

Septin 7 (H-120) is also recommended for detection of septin 7 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Septin 7 siRNA (h): sc-36480 and Septin 7 siRNA (m): sc-36481.

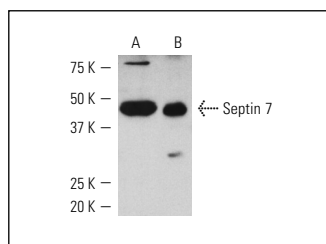
Molecular Weight of Septin 7: 49 kDa.

Positive Controls: A-375 cell lysate: sc-3811 or HeLa whole cell lysate: sc-2200.

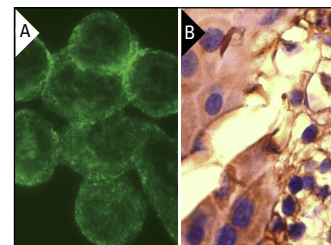
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



Septin 7 (H-120): sc-20620. Western blot analysis of Septin 7 expression in A-375 (A) and HeLa (B) whole cell lysates.



Septin 7 (H-120): sc-20620. Immunofluorescence staining of methanol-fixed HeLa cells (A) and immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse placenta tissue (B) showing membrane and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Maimaitiyiming, M., et al. 2008. Biochemical characterization of membrane-associated Septin from rat brain. *J. Neurochem.* 106: 1175-1183.
2. Lhuillier, P., et al. 2009. Absence of annulus in human asthenozoospermia: Case Report. *Hum. Reprod.* E-published.