

# Septin 10 (G-17): sc-49506

## 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 10, a 517-residue polypeptide which localizes to the cytoplasm and nucleus, shares closest homology to Septin 6 and Septin 8. Septin 10 is expressed ubiquitously, though most abundantly in the placenta, lung, kidney, heart, skeletal muscles, liver and various tumor cell lines. Like other septin family members, Septin 10 displays GTP-binding and GTPase activity. Additionally, Septin 10 is potentially involved in cytokinesis. Upon maturation induced by lipopolysaccharide (LPS), dendritic cells express upregulated amounts of Septin 10.

## REFERENCES

- Cooper, J.A. and Kiehart, D.P. 1996. Septins may form a ubiquitous family of cytoskeletal filaments. *J. Cell Biol.* 134: 1345-1348.
- 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.
- Bläser, S., Jersch, K., Hainmann, I., Wunderle, D., Zgaga-Griesz, A., Busse, A. and Zieger, B. 2002. Human septin-septin interaction: CDCrel-1 partners with KIAA0202. *FEBS Lett.* 519: 169-172.
- Kinoshita, M. and Noda, M. 2002. Roles of septins in the mammalian cytokinesis machinery. *Cell Struct. Funct.* 26: 667-670.
- Sui, L. Zhang, W., Liu, Q., Chen, T., Li, N., Wan, T., Yu, M. and Cao, X. 2003. Cloning and functional characterization of human Septin 10, a novel member of septin family cloned from dendritic cells. *Biochem. Biophys. Res. Commun.* 304: 393-398.
- Joo, E., Tsang, C.W. and Trimble, W.S. 2005. Septins: traffic control at the cytokinesis intersection. *Traffic* 6: 626-634.

## CHROMOSOMAL LOCATION

Genetic locus: SEPT10 (human) mapping to 2q13; Sept10 (mouse) mapping to 10B4.

## SOURCE

Septin 10 (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Septin 10 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-49506 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

Septin 10 (G-17) is recommended for detection of Septin 10 isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:200, 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).

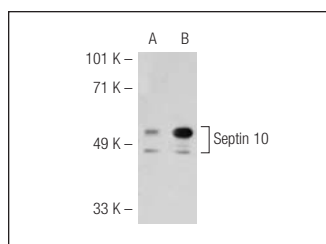
Suitable for use as control antibody for Septin 10 siRNA (h): sc-61528.

Molecular Weight of Septin 10: 60 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Septin 10 (G-17): sc-49506. Western blot analysis of Septin 10 expression in non-transfected: sc-110760 (A) and human Septin 10 transfected: sc-113209 (B) 293 whole cell lysates.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

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