

# Septin 14 (G-14): sc-244109

## BACKGROUND

Septin 14, also known as SEPT14, is a 432 amino acid protein that belongs to the septin family. The highly conserved septin family of GTP-binding cytoskeletal proteins is implicated in membrane transport, apoptosis, cell polarity, cell cycle regulation, cytokinesis and other cellular functions. Septins polymerize into heterooligomeric protein complexes that form filaments, and can associate with cellular membranes, actin filaments and microtubules. Septin 14 has a GTPase domain followed by a C-terminal coiled-coil domain characteristic of group II septins. Septin 14 interacted with all septins except those that are members of its phylogenetic cluster, including itself. Septin 14 shares highest identity (67%) with Septin 10. Expressed in testis and more weakly in fetal liver, tonsil and thymus, the Septin 14 protein is not detected in testicular cancer or other normal or cancer cell lines. The Septin 14 gene is conserved in chimpanzee, canine, bovine, mouse and rat, and maps to human chromosome 7p11.2.

## REFERENCES

- Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. *Nature* 424: 157-164.
- Peterson, E.A., et al. 2007. Characterization of a SEPT9 interacting protein, SEPT14, a novel testis-specific septin. *Mamm. Genome* 18: 796-807.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612140. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Peterson, E.A. and Petty, E.M. 2010. Conquering the complex world of human septins: implications for health and disease. *Clin. Genet.* 77: 511-524.
- Santos, J., et al. 2010. Expression pattern of the septin gene family in acute myeloid leukemias with and without MLL-SEPT fusion genes. *Leuk. Res.* 34: 615-621.
- Shinoda, T., et al. 2010. Septin 14 is involved in cortical neuronal migration via interaction with Septin 4. *Mol. Biol. Cell* 21: 1324-1334.
- Souza, T.A. and Barbosa, J.A. 2010. Cloning, overexpression, purification and preliminary characterization of human septin 8. *Protein J.* 29: 328-335.

## CHROMOSOMAL LOCATION

Genetic locus: SEPT14 (human) mapping to 7p11.2.

## SOURCE

Septin 14 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Septin 14 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-244109 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Septin 14 (G-14) is recommended for detection of Septin 14 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); non cross-reactive with other Septin family members.

Septin 14 (G-14) is also recommended for detection of Septin 14 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Septin 14 siRNA (h): sc-89694, Septin 14 shRNA Plasmid (h): sc-89694-SH and Septin 14 shRNA (h) Lentiviral Particles: sc-89694-V.

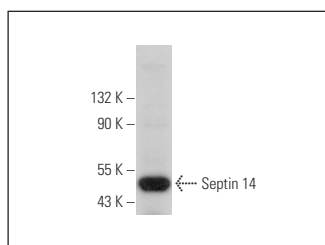
Molecular Weight of Septin 14: 50 kDa.

Positive Controls: human testis extract: sc-363781.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



Septin 14 (G-14): sc-244109. Western blot analysis of Septin 14 expression in human testis tissue extract.

## 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.