SANTA CRUZ BIOTECHNOLOGY, INC.

Septin 12 (M-42): sc-135404

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Septins are members of a conserved family of cytoskeletal GTPases, specifically belonging to the large superclass of P loop GTPases. Septin proteins form homo- and hetero-oligomeric polymers that accumulate into higher-order filaments which may function as dynamic protein scaffolds. Septins play an important role in vesicle trafficking, apoptosis, cytoskeleton remodeling, infection, neurodegeneration, neoplasia and cytokinesis. Septin 12, also known as SEPT12, is a 358 amino acid cytoplasmic protein and filament-forming cytoskeletal GTPase that belongs to the Septin family. Widely expressed and existing as two alternatively spliced isoforms, Septin 12 expression levels are critical for mammalian spermiogenesis. Suggested to play a role in cytokinesis, Septin 12 can exist as a homodimer and interacts with both Septin 6 and Septin 11.

REFERENCES

1. Kinoshita, M. 2003. The septins. Genome Biol. 4: 236.
2. Kinoshita, M. 2003. Assembly of mammalian septins. J. Biochem. 134: 491-496.
3. Hall, P.A., Jung, K., Hillan, K.J. and Russell, S.E. 2005. Expression profiling the human septin gene family. J. Pathol. 206: 269-278.
4. Ding, X., Yu, W., Liu, M., Shen, S., Chen, F., Wan, B. and Yu, L. 2007. SEPT12 interacts with SEPT6 and this interaction alters the filament structure of SEPT6 in Hela cells. J. Biochem. Mol. Biol. 40: 973-978.
5. Lin, Y.H., Lin, Y.M., Wang, Y.Y., Yu, I.S., Lin, Y.W., Wang, Y.H., Wu, C.M., Pan, H.A., Chao, S.C., Yen, P.H., Lin, S.W. and Kuo, P.L. 2009. The expression level of Septin 12 is critical for spermiogenesis. Am. J. Pathol. 174: 1857-1868.

CHROMOSOMAL LOCATION

Genetic locus: SEPT12 (human) mapping to 16p13.3; Sept12 (mouse) mapping to 16 A1.

SOURCE

Septin 12 (M-42) is a rabbit polyclonal antibody raised against amino acids 1-42 mapping at the C-terminus of Septin 12 of mouse origin.

PRODUCT

Each vial contains 200 µg 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Septin 12 (M-42) is recommended for detection of Septin 12 of mouse, rat and, to a lesser extent, 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 12 siRNA (h): sc-93540, Septin 12 siRNA (m): sc-153340, Septin 12 shRNA Plasmid (h): sc-93540-SH, Septin 12 shRNA Plasmid (m): sc-153340-SH, Septin 12 shRNA (h) Lentiviral Particles: sc-93540-V and Septin 12 shRNA (m) Lentiviral Particles: sc-153340-V.

Molecular Weight of Septin 12: 41 kDa.

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.

RESEARCH USE

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