SANTA CRUZ BIOTECHNOLOGY, INC.

Septin 8 siRNA (m): sc-61531

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 8 is a 508 amino acid protein that is expressed in the brain, cardiovascular regions, prostate, testis and ovary. Septin 8 interacts with both Septin 5 and cell division cycle related-1 (CDCrel-1). Septin 8 may play an important role in the functional regulation of hPFTAIRE1, a member of the Cdc2-related kinase family that is localized in cytoplasm. Septin 8, Septin 4 and Septin 5 surround α-granules, implicating these three septins as components of the septin complex in platelets and contributing to platelet biology.

REFERENCES

1. Nagase, T., et al. 1996. Prediction of the coding sequences of unidentified human genes. VI. The coding sequences of 80 new genes (KIAA0201-KIAA0280) deduced by analysis of cDNA clones from cell line KG-1 and brain. DNA Res. 3: 321-329; 341-354.
2. Sudbery, P.E. 2001. The germ tubes of *Candida albicans* hyphae and pseudohyphae show different patterns of septin ring localization. Mol. Microbiol. 41: 19-31.
3. Yang, T., et al. 2002. KIAA0202, a human septin family member, interacting with hPFTAIRE1. Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao 34: 520-525.
4. Castillon, G.A., et al. 2003. Septins have a dual role in controlling mitotic exit in budding yeast. Curr. Biol. 13: 654-658.
5. Longtine, M.S. and Bi, E. 2003. Regulation of septin organization and function in yeast. Trends Cell Biol. 13: 403-409.
6. Bläser, S., et al. 2004. The novel human platelet septin Septin 8 is an interaction partner of Septin 4. Thromb. Haemost. 91: 959-966.
7. Nagata, K., et al. 2004. Biochemical and cell biological analyses of a mammalian septin complex, Septin 7/9b/11. J. Biol. Chem. 279: 55895-55904.

CHROMOSOMAL LOCATION

Genetic locus: Sept8 (mouse) mapping to 11 B1.3.

PRODUCT

Septin 8 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Septin 8 shRNA Plasmid (m): sc-61531-SH and Septin 8 shRNA (m) Lentiviral Particles: sc-61531-V as alternate gene silencing products.

For independent verification of Septin 8 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61531A, sc-61531B and sc-61531C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Septin 8 siRNA (m) is recommended for the inhibition of Septin 8 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

Septin 8 (C-5): sc-390074 is recommended as a control antibody for monitoring of Septin 8 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Septin 8 gene expression knockdown using RT-PCR Primer: Septin 8 (m)-PR: sc-61531-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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