SANTA CRUZ BIOTECHNOLOGY, INC.

STAC siRNA (h): sc-78015

BACKGROUND

STAC (SH3 and cysteine rich domain-containing protein), also known as STAC1, is a 402 amino acid protein that contains one SH3 (Src homology 3) domain and one cysteine-rich domain (CRD). Expressed in brain, STAC is a neuron-specific protein that localizes to the cytoplasm and, based on the frequent involvement of SH3 and CRD domains in signal transduction, is believed to play a role in neuron-specific signal transduction. In addition, STAC may be involved in protecting cells from apoptosis. Due to its neuron-specific expression and putative role in signal transduction, STAC may be implicated in a variety of hereditary neurological diseases.

REFERENCES

1. Suzuki, H., et al. 1996. Stac, a novel neuron-specific protein with cysteine-rich and SH3 domains. Biochem. Biophys. Res. Commun. 229: 902-909.
2. Kawai, J., et al. 1998. Human and mouse chromosomal mapping of Stac, a neuron-specific protein with an SH3 domain. Genomics 47: 140-142.
3. Petek, E., et al. 1999. Assignment of STAC to human chromosome band 3p22.3 between D3S3718 and D3S1611. Cytogenet. Cell Genet. 84: 184-185.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602317. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Hardy, K., et al. 2005. Transcriptional networks and cellular senescence in human mammary fibroblasts. Mol. Biol. Cell 16: 943-953.
6. Kato, Y., et al. 2006. Gene expression pattern in oral cancer cervical lymph node metastasis. Oncol. Rep. 16: 1009-1014.

CHROMOSOMAL LOCATION

Genetic locus: STAC (human) mapping to 3p22.3.

PRODUCT

STAC siRNA (h) 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 STAC shRNA Plasmid (h): sc-78015-SH and STAC shRNA (h) Lentiviral Particles: sc-78015-V as alternate gene silencing products.

For independent verification of STAC (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-78015A, sc-78015B and sc-78015C.

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

STAC siRNA (h) is recommended for the inhibition of STAC expression in human 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

STAC (J-19): sc-100661 is recommended as a control antibody for monitoring of STAC 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 STAC gene expression knockdown using RT-PCR Primer: STAC (h)-PR: sc-78015-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.