SANTA CRUZ BIOTECHNOLOGY, INC.

SH3D19 siRNA (h): sc-88945

BACKGROUND

SH3D19 (SH3 domain-containing protein 19), also known as EBP, EEN-binding protein, EVE1 or Kryn, is a 790 amino acid protein that is widely expressed with highest expression in kidney, heart, lung, liver, skeletal muscle and small intestine. Localized to the cytoplasm and recruited to the nucleus by a fusion protein known as MLL-EEN (mixed-lineage leukemia-endophilin), SH3D19 is thought to play a role in regulating the involvement of ADAM (A disintegrin and metalloproteases) proteins in EGFR (epidermal growth factor receptor)-ligand shedding pathways. SH3D19 contains five SH3 domains and may also function to suppress both Ras-induced cellular transformation and Ras-associated activation of proteins such as Elk-1. Translocation events involving the SH3D19 gene are implicated in acute myeloid leukemia, suggesting a possible role for SH3D19 in carcinogenesis. Five isoforms of SH3D19 are expressed due to alternative splicing events.

REFERENCES

1. Shimomura, Y., et al. 2003. Gene expression of SH3D19, a novel adaptor protein with five Src homology 3 domains, in anagen mouse hair follicles. J. Dermatol. Sci. 31: 43-51.
2. Tanaka, M., et al. 2004. ADAM binding protein EVE1 is required for ectodomain shedding of epidermal growth factor receptor ligands. J. Biol. Chem. 279: 41950-41959.
3. Yam, J.W., et al. 2004. Identification and characterization of EBP, a novel EEN binding protein that inhibits Ras signaling and is recruited into the nucleus by the MLL-EEN fusion protein. Blood 103: 1445-1453.
4. Nguyen, T.T., et al. 2006. Identification of novel RUNX1 (AML-1) translocation partner genes SH3D19, YTHDF2, and ZNF687 in acute myeloid leukemia. Genes Chromosomes Cancer 45: 918-932.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 608674. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: SH3D19 (human) mapping to 4q31.3.

PRODUCT

SH3D19 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 SH3D19 shRNA Plasmid (h): sc-88945-SH and SH3D19 shRNA (h) Lentiviral Particles: sc-88945-V as alternate gene silencing products.

For independent verification of SH3D19 (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-88945A, sc-88945B and sc-88945C.

PROTOCOLS

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

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

SH3D19 siRNA (h) is recommended for the inhibition of SH3D19 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

SH3D19 (G-6): sc-377282 is recommended as a control antibody for monitoring of SH3D19 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 SH3D19 gene expression knockdown using RT-PCR Primer: SH3D19 (h)-PR: sc-88945-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.