SANTA CRUZ BIOTECHNOLOGY, INC.

SCYL3 siRNA (m): sc-153280

BACKGROUND

SCYL3 (SCY1-like 3), also known as protein-associating with the carboxyl-terminal domain of Ezrin, is a 742 amino acid protein that belongs to the protein kinase superfamily. The SCYL3 protein contains an N-terminal myristoylation consensus sequence, followed by a protein kinase domain, two tandemly arrayed HEAT motifs composed of pairs of antiparallel α helices, and a C-terminal Ezrin-binding domain. The SCYL3 protein may be phosphorylated. Ubiquitously expressed, the SCYL3 protein colocalizes with Ezrin, Actin and HCAM in lamellipodia. The SCYL3 protein may be myristoylated, which may target SCYL3 to Golgi compartment. Existing as 2 alternatively spliced isoforms, the SCYL3 gene contains 14 exons, is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly and mosquito, and maps to human chromosome 1q24.2.

REFERENCES

1. Sullivan, A., et al. 2003. PACE-1, a novel protein that interacts with the C-terminal domain of Ezrin. Exp. Cell Res. 284: 224-238.
2. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608192. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Maurer-Stroh, S., et al. 2004. MYRbase: analysis of genome-wide glycine myristoylation enlarges the functional spectrum of eukaryotic myristoylated proteins. Genome Biol. 5: R21.
4. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
6. Cheung, C.L., et al. 2009. Pre-B-cell leukemia homeobox 1 (PBX1) shows functional and possible genetic association with bone mineral density variation. Hum. Mol. Genet. 18: 679-687.
7. Traynor, B.J., et al. 2010. Kinesin-associated protein 3 (KIFAP3) has no effect on survival in a population-based cohort of ALS patients. Proc. Natl. Acad. Sci. USA 107: 12335-12338.

CHROMOSOMAL LOCATION

Genetic locus: Scyl3 (mouse) mapping to 1 H2.2.

PRODUCT

SCYL3 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 SCYL3 shRNA Plasmid (m): sc-153280-SH and SCYL3 shRNA (m) Lentiviral Particles: sc-153280-V as alternate gene silencing products.

For independent verification of SCYL3 (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-153280A, sc-153280B and sc-153280C.

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

SCYL3 siRNA (m) is recommended for the inhibition of SCYL3 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

SCYL3 (G-8): sc-398328 is recommended as a control antibody for monitoring of SCYL3 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 SCYL3 gene expression knockdown using RT-PCR Primer: SCYL3 (m)-PR: sc-153280-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.