SANTA CRUZ BIOTECHNOLOGY, INC.

CASC4 siRNA (m): sc-142017

BACKGROUND

CASC4 (cancer susceptibility candidate 4), also known as H63, has been identified as a gene associated with HER-2/neu overexpression. Consisting of 433 amino acids and existing as three alternatively spliced isoforms, CASC4 is a single-pass type II membrane protein belonging to the GOLM1/CASC4 family. The gene encoding CASC4 maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes in the 15q11-q13 region. Tay-Sachs disease and Marfan syndrome are associated with chromosome 15 through the HEXA and FBN1 genes, respectively.

REFERENCES

1. Hurowitz, G.I., et al. 1993. Neuropsychiatric aspects of adult-onset Tay-Sachs disease: two case reports with several new findings. J Neuropsychiatry Clin. Neurosci. 5: 30-36.
2. Oh, J.J., et al. 1999. Identification of differentially expressed genes associated with HER-2/neu overexpression in human breast cancer cells. Nucleic Acids Res. 27: 4008-4017.
3. Scheer, M., et al. 2003. Evaluation of her-2/neu amplification/overexpression in OSCC with fluorescence *in situ* hybridization (FISH) and immunohistochemistry. Mund Kiefer Gesichtschir. 7: 138-145.
4. Sato, T., et al. 2003. Expression of HER2/neu does not correlate with survival in soft tissue sarcoma. Onkologie 26: 268-271.
5. Midla, G.S. 2008. Diagnosis and management of patients with Marfan syndrome. JAAPA 21: 21-25.
6. Dan, B. 2009. Angelman syndrome: current understanding and research prospects. Epilepsia 50: 2331-2339.

CHROMOSOMAL LOCATION

Genetic locus: Casc4 (mouse) mapping to 2 E5.

PRODUCT

CASC4 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 CASC4 shRNA Plasmid (m): sc-142017-SH and CASC4 shRNA (m) Lentiviral Particles: sc-142017-V as alternate gene silencing products.

For independent verification of CASC4 (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-142017A, sc-142017B and sc-142017C.

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

CASC4 siRNA (m) is recommended for the inhibition of CASC4 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CASC4 gene expression knockdown using RT-PCR Primer: CASC4 (m)-PR: sc-142017-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.