SANTA CRUZ BIOTECHNOLOGY, INC.

CBE1 siRNA (m): sc-142034

BACKGROUND

CBE1 (ciliated bronchial epithelium 1), also known as C9orf24 (chromosome 9 open reading frame 24) or testis development protein NYD-SP22, is a 262 amino acid protein that exists as three alternatively spliced isoforms. CBE1 is expressed in ciliated cells and is found at high levels in adult testis. Suggested to play a role in ciliogenesis and spermatogenesis, CBE1 is encoded by a gene that maps to human chromosome 9p13.3. Chromosome 9 consists of about 145 million bases, represents 4% of the human genome and encodes nearly 900 genes. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

1. Yoshisue, H., et al. 2004. Characterization of ciliated bronchial epithelium 1, a ciliated cell-associated gene induced during mucociliary differentiation. Am. J. Respir. Cell Mol. Biol. 31: 491-500.
2. Burmeister, T., et al. 2007. Atypical BCR-ABL mRNA transcripts in adult acute lymphoblastic leukemia. Haematologica 92: 1699-1702.
3. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (rendu-osler disease). Respiration 74: 361-378.
4. Zeitz, M.J., et al. 2009. Organization of the amplified type I interferon gene cluster and associated chromosome regions in the interphase nucleus of human osteosarcoma cells. Chromosome Res. 17: 305-319.
5. Haitchi, H.M., et al. 2009. Chronological expression of Ciliated Bronchial Epithelium 1 during pulmonary development. Eur. Respir. J. 33: 1095-1104.

CHROMOSOMAL LOCATION

Genetic locus: 1110017D15Rik (mouse) mapping to 4 A5.

PRODUCT

CBE1 siRNA (m) is a pool of 2 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 CBE1 shRNA Plasmid (m): sc-142034-SH and CBE1 shRNA (m) Lentiviral Particles: sc-142034-V as alternate gene silencing products.

For independent verification of CBE1 (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-142034A and sc-142034B.

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

CBE1 siRNA (m) is recommended for the inhibition of CBE1 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 CBE1 gene expression knockdown using RT-PCR Primer: CBE1 (m)-PR: sc-142034-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.