SANTA CRUZ BIOTECHNOLOGY, INC.

KLHDC2 siRNA (h): sc-92163

BACKGROUND

KLHDC2 (kelch domain-containing protein 2), also known as HCA33 (hepatocellular carcinoma-associated antigen 33) or HCLP-1 (host cell factor-like protein 1), is a 406 amino acid protein that contains six kelch repeats. Localizing to the nucleus, KLHDC2 is widely expressed, with high levels found in muscle, heart, pancreas and liver. KLHDC2 interacts directly with CREB3, repressing CREB3-mediated transcription. Existing as two alternatively spliced isoforms, the gene encoding KLHDC2 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

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3. Chin, K.T., Xu, H.T., Ching, Y.P. and Jin, D.Y. 2007. Differential subcellular localization and activity of kelch repeat proteins KLHDC1 and KLHDC2. Mol. Cell. Biochem. 296: 109-119.
4. Larner, A.J. and Doran, M. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimers disease: an update. J. Alzheimers Dis. 17: 259-265.
5. Topic, A., Alempijevic, T., Milutinovic, A.S. and Kovacevic, N. 2009. α-1-antitrypsin phenotypes in adult liver disease patients. Ups. J. Med. Sci. 114: 228-234.

CHROMOSOMAL LOCATION

Genetic locus: KLHDC2 (human) mapping to 14q21.3.

PRODUCT

KLHDC2 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 KLHDC2 shRNA Plasmid (h): sc-92163-SH and KLHDC2 shRNA (h) Lentiviral Particles: sc-92163-V as alternate gene silencing products.

For independent verification of KLHDC2 (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-92163A, sc-92163B and sc-92163C.

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

KLHDC2 siRNA (h) is recommended for the inhibition of KLHDC2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KLHDC2 gene expression knockdown using RT-PCR Primer: KLHDC2 (h)-PR: sc-92163-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.