SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL7 siRNA (m): sc-146536

BACKGROUND

The BTB (Broad-Complex, Tramtrack and Bric a brac) domain, also known as the POZ (Poxvirus and zinc finger) domain, is an N-terminal homodimerization domain that contains multiple copies of kelch repeats and/or C_2H_2-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function. KLHL7 (kelch-like protein 7) is a 586 amino acid protein that contains one BTB (POZ) domain and six kelch repeats. Localizing to the nucleus, KLHL7 is widely expressed, with high levels found in the central nervous system, testis, and adult and fetal heart. Existing as four alternatively spliced isoforms, the gene encoding KLHL7 maps to human chromosome 7p15.3 and mouse chromosome 5 A3; defects to this gene have been linked to retinitis pigmentosa type 42 (RP42). RP42 is a disorder characterized by night vision blindness and loss of midperipheral visual field.

REFERENCES

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4. Wen, Y., Locke, K.G., Klein, M., Bowne, S.J., Sullivan, L.S., Ray, J.W., Daiger, S.P., Birch, D.G. and Hughbanks-Wheaton, D.K. 2011. Phenotypic characterization of 3 families with autosomal dominant retinitis pigmentosa due to mutations in KLHL7. Arch. Ophthalmol. 129: 1475-1482.
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CHROMOSOMAL LOCATION

Genetic locus: Klhl7 (mouse) mapping to 5 A3.

PRODUCT

KLHL7 siRNA (m) is a target-specific 19-25 nt siRNA 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 KLHL7 shRNA Plasmid (m): sc-146536-SH and KLHL7 shRNA (m) Lentiviral Particles: sc-146536-V as alternate gene silencing products.

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

KLHL7 siRNA (m) is recommended for the inhibition of KLHL7 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 KLHL7 gene expression knockdown using RT-PCR Primer: KLHL7 (m)-PR: sc-146536-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.