SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL29 siRNA (h): sc-94753

BACKGROUND

KLHL29 (kelch-like protein 29), also known as KBTBD9, is a 655 amino acid protein that is related to the *Drosophila* kelch protein. Mutations affecting kelch function result in failure of kelch to associate with the ring canals and subsequent female sterility. Human KLHL29 contains six kelch repeats and one BTB (POZ) domain. 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. KLHL29 exists as two alternatively spliced isoforms which are encoded by a gene that maps to human chromosome 2p24.1.

REFERENCES

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2. Robinson, D.N., et al. 1997. *Drosophila* kelch is an oligomeric ring canal Actin organizer. J. Cell Biol. 138: 799-810.
3. Lai, F., et al. 2000. Molecular characterization of KLHL3, a human homologue of the *Drosophila* kelch gene. Genomics 66: 65-75.
4. Adams, J., et al. 2000. The kelch repeat superfamily of proteins: propellers of cell function. Trends Cell Biol. 10: 17-24.
5. Prag, S., et al. 2003. Molecular phylogeny of the kelch-repeat superfamily reveals an expansion of BTB/kelch proteins in animals. BMC Bioinformatics 4: 42.
6. Stogios, P.J., et al. 2004. The BACK domain in BTB-kelch proteins. Trends Biochem. Sci. 29: 634-637.
7. Gorjánácz, M., et al. 2006. Domains of Importin-α2 required for ring canal assembly during *Drosophila* oogenesis. J. Struct. Biol. 154: 27-41.

CHROMOSOMAL LOCATION

Genetic locus: KLHL29 (human) mapping to 2p24.1.

PRODUCT

KLHL29 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 KLHL29 shRNA Plasmid (h): sc-94753-SH and KLHL29 shRNA (h) Lentiviral Particles: sc-94753-V as alternate gene silencing products.

For independent verification of KLHL29 (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-94753A, sc-94753B and sc-94753C.

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

KLHL29 siRNA (h) is recommended for the inhibition of KLHL29 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 KLHL29 gene expression knockdown using RT-PCR Primer: KLHL29 (h)-PR: sc-94753-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.