SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL2 siRNA (m): sc-146519

BACKGROUND

KLHL2 (kelch-like protein 2), also known as Actin-binding protein Mayven, is a 593 amino acid protein related to the *Drosophila* kelch protein. KLHL2 protein 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. Highly expressed in brain, KLHL2 is thought to play a role in the organization of the actin cytoskeleton in brain cells.

REFERENCES

1. Soltysik-Espanola, M., Rogers, R.A., Jiang, S., Kim, T.A., Gaedigk, R., White, R.A., Avraham, H. and Avraham, S. 1999. Characterization of Mayven, a novel Actin-binding protein predominantly expressed in brain. Mol. Biol. Cell 10: 2361-2375.
2. Lai, F., Orelli, B.J., Till, B.G., Godley, L.A., Fernald, A.A., Pamintuan, L. and Le Beau, M.M. 2000. Molecular characterization of KLHL3, a human homologue of the *Drosophila* kelch gene. Genomics 66: 65-75.
3. Williams, S.K., Spence, H.J., Rodgers, R.R., Ozanne, B.W., Fitzgerald, U. and Barnett, S.C. 2005. Role of Mayven, a kelch-related protein in oligodendrocyte process formation. J. Neurosci. Res. 81: 622-631.
4. Bu, X., Avraham, H.K., Li, X., Lim, B., Jiang, S., Fu, Y., Pestell, R.G. and Avraham, S. 2005. Mayven induces c-Jun expression and cyclin D1 activation in breast cancer cells. Oncogene 24: 2398-2409.
5. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 605774. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Klhl2 (mouse) mapping to 8 B3.1.

PRODUCT

KLHL2 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 KLHL2 shRNA Plasmid (m): sc-146519-SH and KLHL2 shRNA (m) Lentiviral Particles: sc-146519-V as alternate gene silencing 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

KLHL2 siRNA (m) is recommended for the inhibition of KLHL2 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 KLHL2 gene expression knockdown using RT-PCR Primer: KLHL2 (m)-PR: sc-146519-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.