SANTA CRUZ BIOTECHNOLOGY, INC.

YPEL2 siRNA (h): sc-93750

BACKGROUND

The family of yippee-like (YPEL) proteins include YPEL1, YPEL2, YPEL3, YPEL4 and YPEL5, all of which are widely expressed in both adult and fetal tissue and contain a characteristic 86-amino acid YPEL consensus sequence. YPEL proteins share a high degree of sequence homology with their rodent homologs, suggesting a conserved function between species. YPEL2 (yippee-like 2 *(Drosophila)),* also known as FKSG4, is a 119 amino acid nuclear protein that is widely expressed in adult and fetal kidney, heart, liver, lung and skeletal muscle. The gene encoding YPEL2 maps to human chromosome 17q22 and mouse chromosome 11 C. Chromosome 17 makes up over 2.5% of the human genome and contains approximately 81 million bases encoding over 1,200 genes, including those associated with Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease.

REFERENCES

1. Farlie, P., Reid, C., Wilcox, S., Peeters, J., Reed, G. and Newgreen, D. 2001. Ypel1: a novel nuclear protein that induces an epithelial-like morphology in fibroblasts. Genes Cells 6: 619-629.
2. Roxström-Lindquist, K. and Faye, I. 2001. The Drosophila gene Yippee reveals a novel family of putative zinc binding proteins highly conserved among eukaryotes. Insect Mol. Biol. 10: 77-86.
3. Hosono, K., Sasaki, T., Minoshima, S. and Shimizu, N. 2004. Identification and characterization of a novel gene family YPEL in a wide spectrum of eukaryotic species. Gene 340: 31-43.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609724. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Hosono, K., Noda, S., Shimizu, A., Nakanishi, N., Ohtsubo, M., Shimizu, N. and Minoshima, S. 2010. YPEL5 protein of the YPEL gene family is involved in the cell cycle progression by interacting with two distinct proteins RanBPM and RanBP10. Genomics 96: 102-111.

CHROMOSOMAL LOCATION

Genetic locus: YPEL2 (human) mapping to 17q22.

PRODUCT

YPEL2 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 YPEL2 shRNA Plasmid (h): sc-93750-SH and YPEL2 shRNA (h) Lentiviral Particles: sc-93750-V as alternate gene silencing products.

For independent verification of YPEL2 (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-93750A, sc-93750B and sc-93750C.

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

YPEL2 siRNA (h) is recommended for the inhibition of YPEL2 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 YPEL2 gene expression knockdown using RT-PCR Primer: YPEL2 (h)-PR: sc-93750-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.