SANTA CRUZ BIOTECHNOLOGY, INC.

YPEL3 siRNA (h): sc-93298

BACKGROUND

YPEL3 (protein yippee-like 3), also known as MGC10500 or FKSG5, is a 119 amino acid protein involved in apoptosis and proliferation of myeloid precursor cells. YPEL3 belongs to a family of yippee-like proteins that include YPEL1, YPEL2, 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. YPEL3 has been observed at high levels in placenta, pancreas and testis, and at the nucleolus and centrosome during interphase, suggesting that YPEL3 plays a novel role in cell division. YPEL3 likely becomes degraded by the proteasome following ubiquitination and two YPEL3 isoforms exist as a result of alternative splicing. The gene encoding YPEL5 contains five exons and maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, a gastrointestinal inflammatory condition.

REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. Am. J. Hum. Genet. 52: 249-254.
3. 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.
4. Hosono, K., et al. 2004. Identification and characterization of a novel gene family YPEL in a wide spectrum of eukaryotic species. Gene 340: 31-43.
5. Mathew, C.G. and Lewis, C.M. 2004. Genetics of inflammatory bowel disease: progress and prospects. Hum. Mol. Genet. 13: R161-R168.
6. 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/

CHROMOSOMAL LOCATION

Genetic locus: YPEL3 (human) mapping to 16p11.2.

PRODUCT

YPEL3 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 YPEL3 shRNA Plasmid (h): sc-93298-SH and YPEL3 shRNA (h) Lentiviral Particles: sc-93298-V as alternate gene silencing products.

For independent verification of YPEL3 (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-93298A, sc-93298B and sc-93298C.

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

YPEL3 siRNA (h) is recommended for the inhibition of YPEL3 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 YPEL3 gene expression knockdown using RT-PCR Primer: YPEL3 (h)-PR: sc-93298-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.