



## YPEL1 siRNA (h): sc-76944

### BACKGROUND

YPEL1 (protein yippee-like 1), also known as FKSG3 or MGC64992, is a 119 amino acid protein that localizes to the nucleus and is thought to play a role in the epitheloid conversion of fibroblasts. YPEL1 belongs to a family of yippee-like proteins that include YPEL2, YPEL3, YPEL4 and YPEL5, all of which are widely expressed in both adult and fetal tissue. YPEL1 contains an 86-amino acid YPEL consensus sequence which is characteristic of all YPEL proteins, and is expressed in fetal brain and adult testis, with lower expression in fetal lung and kidney. YPEL1 has also been found to localize to the centrosome and nucleolus during interphase. YPEL1 likely plays a role in regulation of cellular morphology and craniofacial development. The gene encoding YPEL1 contains five exons and maps to human chromosome 22q11.21, a region linked syndromes involving malformation of the craniofacial complex such as velocardiofacial syndrome and DiGeorge syndrome.

### REFERENCES

1. de la Chapelle, A., et al. 1981. A deletion in chromosome 22 can cause DiGeorge syndrome. *Hum. Genet.* 57: 253-256.
2. Carlson, C., et al. 1997. Molecular definition of 22q11 deletions in 151 velo-cardio-facial syndrome patients. *Am. J. Hum. Genet.* 61: 620-629.
3. Farlie, P., et al. 2001. YPEL1: a novel nuclear protein that induces an epithelial-like morphology in fibroblasts. *Genes Cells* 6: 619-629.
4. Bartsch, O., et al. 2003. DiGeorge/velocardiofacial syndrome: fish studies of chromosomes 22q11 and 10p14, and clinical reports on the proximal 22q11 deletion. *Am. J. Med. Genet. A.* 117A: 1-5.
5. 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.
6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 608082. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

### CHROMOSOMAL LOCATION

Genetic locus: YPEL1 (human) mapping to 22q11.21.

### PRODUCT

YPEL1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see YPEL1 shRNA Plasmid (h): sc-76944-SH and YPEL1 shRNA (h) Lentiviral Particles: sc-76944-V as alternate gene silencing products.

For independent verification of YPEL1 (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-76944A, sc-76944B and sc-76944C.

### PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

YPEL1 siRNA (h) is recommended for the inhibition of YPEL1 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  $\mu$ M in 66  $\mu$ l. 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 YPEL1 gene expression knockdown using RT-PCR Primer: YPEL1 (h)-PR: sc-76944-PR (20  $\mu$ l). 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.