

## EIG121 siRNA (h): sc-88702

### BACKGROUND

EIG121 (Estrogen-induced gene 121 protein), also known as KIAA1324, is a 1,013 amino acid single-pass transmembrane protein that, though expressed in normal endometrium, is overexpressed in endometrioid tumors. This two to three fold upregulation seems to be in response to estrogen replacement therapy, therefore making EIG121 a biomarker for a hyperestrogenic state and estrogen-related type I endometrial carcinoma. As an evolutionarily conserved gene, EIG121 is also expressed during early *Xenopus* development, showing maximum expression at the gastrula stage. The gene encoding EIG121 maps to human chromosome 1, which is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are four isoforms of EIG121 that are produced as a result of alternative splicing events.

### REFERENCES

1. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
2. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14: 2121-2127.
3. Bauer, M., et al. 2004. Different transcriptional expression of KIAA1324 and its splicing variants in human carcinoma cell lines with different metastatic capacity. Oncol. Rep. 11: 677-680.
4. Deng, L., et al. 2005. Identification of a novel estrogen-regulated gene, EIG121, induced by hormone replacement therapy and differentially expressed in type I and type II endometrial cancer. Clin. Cancer Res. 11: 8258-8264.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
6. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.

### CHROMOSOMAL LOCATION

Genetic locus: KIAA1324 (human) mapping to 1p13.3.

### PRODUCT

EIG121 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 EIG121 shRNA Plasmid (h): sc-88702-SH and EIG121 shRNA (h) Lentiviral Particles: sc-88702-V as alternate gene silencing products.

For independent verification of EIG121 (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-88702A, sc-88702B and sc-88702C.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### 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

EIG121 siRNA (h) is recommended for the inhibition of EIG121 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 EIG121 gene expression knockdown using RT-PCR Primer: EIG121 (h)-PR: sc-88702-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.