

## EG-VEGF siRNA (m): sc-45393

### BACKGROUND

Endocrine gland-derived vascular endothelial growth factor (EG-VEGF) induces proliferation, migration and fenestration in capillary endothelial cells derived from endocrine glands. EG-VEGF possesses a HIF-1 binding site; its expression is induced by hypoxia and restricted to the steroidogenic glands (ovary, testis, adrenal and placenta). EG-VEGF expression is often complementary to the expression of VEGF, suggesting that these molecules function in a coordinated manner. EG-VEGF is an example of a class of highly specific mitogens that act to regulate proliferation and differentiation of the vascular endothelium in a tissue-specific manner. EG-VEGF is expressed largely in one type of tissue and acts selectively on one type of endothelium. EG-VEGF, possibly through binding to a G protein-coupled receptor, results in the activation of MAPK p44/42 and phosphatidylinositol 3-kinase signaling pathways, leading to proliferation, migration and survival of responsive endothelial cells.

### REFERENCES

1. Carmeliet, P. 2001. Cardiovascular biology. Creating unique blood vessels. *Nature* 412: 868-869.
2. LeCouter, J., et al. 2001. Identification of an angiogenic mitogen selective for endocrine gland endothelium. *Nature* 412: 877-984.
3. Lin, R., et al. 2002. Characterization of endocrine gland-derived vascular endothelial growth factor signaling in adrenal cortex capillary endothelial cells. *J. Biol. Chem.* 277: 8724-8729.
4. Lin, D.C., et al. 2002. Identification and molecular characterization of two closely related G protein-coupled receptors activated by prokineticins/EG-VEGF. *J. Biol. Chem.* 277: 19276-19280.

### CHROMOSOMAL LOCATION

Genetic locus: Prok1 (mouse) mapping to 3 F2.3.

### PRODUCT

EG-VEGF siRNA (m) is a pool of 2 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 EG-VEGF shRNA Plasmid (m): sc-45393-SH and EG-VEGF shRNA (m) Lentiviral Particles: sc-45393-V as alternate gene silencing products.

For independent verification of EG-VEGF (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45393A and sc-45393B.

### 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

EG-VEGF siRNA (m) is recommended for the inhibition of EG-VEGF 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  $\mu$ 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.

### GENE EXPRESSION MONITORING

EG-VEGF (E-12: sc-390741 is recommended as a control antibody for monitoring of EG-VEGF gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### RESEARCH USE

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

### PROTOCOLS

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