

FGF-8F siRNA (h): sc-156102

BACKGROUND

Fibroblast growth factor-1 (FGF-1), also designated acidic FGF, and fibroblast growth factor-2 (FGF-2), also designated basic FGF, are members of a family of growth factors that stimulate proliferation of cells of mesenchymal, epithelial and neuroectodermal origin. Additional members of the FGF family include the oncogenes FGF-3 (Int2) and FGF-4 (hst/Kaposi), FGF-5, FGF-6, FGF-7 (KGF), FGF-8 (AIGF), FGF-9 (GAF) and FGF-10–FGF-23. Members of the FGF family share 30–55% amino acid sequence identity and similar gene structure, and are capable of transforming cultured cells when overexpressed in transfected cells. FGF-8 is a 233 amino acid secreted protein that is expressed primarily in adult gonads. Existing as four alternatively spliced isoforms designated FGF-8E, FGF-8A, FGF-8B and FGF-8F, FGF-8 is encoded by a gene that maps to human chromosome 10q24.32. Mutations to the FGF-8 gene result in Kallman syndrome type 6 (KAL6), a disease characterized by hypogonadotropic hypogonadism and anosmia.

REFERENCES

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2. Tanaka, A., et al. 1992. Cloning and characterization of an androgen-induced growth factor essential for the androgen-dependent growth of mouse mammary carcinoma cells. *Proc. Natl. Acad. Sci. USA* 89: 8928–8932.
3. Tassi, E., et al. 2001. Enhancement of fibroblast growth factor (FGF) activity by an FGF-binding protein. *J. Biol. Chem.* 276: 40247–40253.
4. Tassi, E., et al. 2006. Tumor angiogenesis: initiation and targeting-therapeutic targeting of an FGF-binding protein, an angiogenic switch molecule, and indicator of early stages of gastrointestinal adenocarcinomas -. *Cancer Res. Treat.* 38: 189–197.
5. Tassi, E., et al. 2006. The angiogenic switch molecule, secreted FGF-binding protein, an indicator of early stages of pancreatic and colorectal adenocarcinoma. *Semin. Oncol.* 33: S50–S56.
6. Zhang, W., et al. 2008. Effect of FGF-binding protein 3 on vascular permeability. *J. Biol. Chem.* 283: 28329–28337.
7. Ojeda, L., et al. 2011. Critical role of PI3K/Akt/GSK3 in motoneuron specification from human neural stem cells in response to FGF2 and EGF. *PLoS ONE* 6: e23414.

CHROMOSOMAL LOCATION

Genetic locus: FGF8 (human) mapping to 10q24.32.

PRODUCT

FGF-8F siRNA (h) is a target-specific 19–25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50–100 transfections. Also see FGF-8F shRNA Plasmid (h): sc-156102-SH and FGF-8F shRNA (h) Lentiviral Particles: sc-156102-V as alternate gene silencing 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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

FGF-8F siRNA (h) is recommended for the inhibition of FGF-8F 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 μ M in 66 μ 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 FGF-8F gene expression knockdown using RT-PCR Primer: FGF-8F (h)-PR: sc-156102-PR (20 μ 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.