SANTA CRUZ BIOTECHNOLOGY, INC.

FGF-BP3 siRNA (h): sc-90736

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fibroblast growth factors (FGFs) represent a family of over twenty distinct proteins that are ubiquitously expressed in mammalian systems. FGF activity influences development, adult tissue homeostasis, angiogenesis and cancer progression. Fibroblast growth factor binding protein, known as FGF-BP, is a secreted protein that binds FGF-1 and FGF-2 and is involved in mobilization and activation of FGFs from the extracellular matrix (ECM). FGF-BP expression is up-regulated during early phases of tumorigenesis, indicating that the role of FGF-BP in angiogenesis is a critical early step in the development and progression of tumors. The fibroblast growth factor-binding protein family also includes FGF-BP2 and FGF-BP3. FGF-BP3 is thought to play a critical role in the regulation of emotional states and in the development of anxiety disorders and may serve as a therapeutic target.

REFERENCES

1. Tassi, E., et al. 2001. Enhancement of fibroblast growth factor (FGF) activity by an FGF-binding protein. J. Biol. Chem. 276: 40247-40253.
2. 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.
3. Abuharbeid, S., et al. 2006. The fibroblast growth factor-binding protein FGF-BP. Int. J. Biochem. Cell Biol. 38: 1463-1468.
4. 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.
5. Zhang, W., et al. 2008. Effect of FGF-binding protein 3 on vascular permeability. J. Biol. Chem. 283: 28329-28337.
6. Yamanaka, Y., et al. 2010. Inactivation of fibroblast growth factor binding protein 3 causes anxiety-related behaviors. Mol. Cell. Neurosci. 46: 200-212.

CHROMOSOMAL LOCATION

Genetic locus: FGFBP3 (human) mapping to 10q23.32.

PRODUCT

FGF-BP3 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 FGF-BP3 shRNA Plasmid (h): sc-90736-SH and FGF-BP3 shRNA (h) Lentiviral Particles: sc-90736-V as alternate gene silencing products.

For independent verification of FGF-BP3 (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-90736A, sc-90736B and sc-90736C.

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

FGF-BP3 siRNA (h) is recommended for the inhibition of FGF-BP3 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 FGF-BP3 gene expression knockdown using RT-PCR Primer: FGF-BP3 (h)-PR: sc-90736-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.