SANTA CRUZ BIOTECHNOLOGY, INC.

FIBP siRNA (h): sc-96425

BACKGROUND

Fibroblast growth factors (FGFs) represent a family of over 20 distinct proteins that are ubiquitously expressed in mammalian systems. FGF activity influences development, adult tissue homeostasis, angiogenesis and cancer progression. The FGF-1 intracellular-binding protein (FIBP) is a 364 amino acid protein that binds to internalized FGF-1 and is thought to be involved in mitogenic function of FGF-1. FIBP localizes to the nucleus and is highly expressed in heart, skeletal muscle and pancreas and at lower levels in brain, placenta, liver and kidney. The gene encoding FIBP is expressed as two isoforms, designated long and short, which are produced as a result of alternative splicing events.

REFERENCES

1. Volkin, D.B. and Middaugh, C.R. 1996. The characterization, stabilization, and formulation of acidic fibroblast growth factor. Pharm Biotechnol. 9: 181-217.
2. Guo, C., Zhang, D. and Wu, K. 1997. Biological function and clinical use of fibroblast growth factors. Zhongguo Xiu Fu Chong Jian Wai Ke Za Zhi 11: 272-275.
3. Kolpakova, E., Wiedłocha, A., Stenmark, H., Klingenberg, O., Falnes, P.O. and Olsnes, S. 1998. Cloning of an intracellular protein that binds selectively to mitogenic acidic fibroblast growth factor. Biochem. J. 336: 213-222.
4. Kolpakova, E., Frengen, E., Stokke, T. and Olsnes, S. 2000. Organization, chromosomal localization and promoter analysis of the gene encoding human acidic fibroblast growth factor intracellular binding protein. Biochem. J. 352: 629-635.
5. Kolpakova, E., Rusten, T.E. and Olsnes, S. 2003. Characterization and tissue expression of acidic fibroblast growth factor binding protein homologue in *Drosophila melanogaster.* Gene 310: 185-191.
6. Wiedłocha, A. and Sørensen, V. 2004. Signaling, internalization, and intracellular activity of fibroblast growth factor. Curr. Top. Microbiol. Immunol. 286: 45-79.
7. Zakrzewska, M., Marcinkowska, E. and Wiedlocha, A. 2008. FGF-1: from biology through engineering to potential medical applications. Crit. Rev. Clin. Lab Sci. 45: 91-135.
8. Forde, N., Mihm, M., Canty, M.J., Zielak, A.E., Baker, P.J., Park, S., Lonergan, P., Smith, G.W., Coussens, P.M., Ireland, J.J. and Evans, A.C. 2008. Differential expression of signal transduction factors in ovarian follicle development: a functional role for betaglycan and FIBP in granulosa cells in cattle. Physiol. Genomics 33: 193-204.

CHROMOSOMAL LOCATION

Genetic locus: FIBP (human) mapping to 11q13.1.

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.

PRODUCT

FIBP siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FIBP shRNA Plasmid (h): sc-96425-SH and FIBP shRNA (h) Lentiviral Particles: sc-96425-V as alternate gene silencing products.

For independent verification of FIBP (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-96425A and sc-96425B.

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

FIBP siRNA (h) is recommended for the inhibition of FIBP 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 FIBP gene expression knockdown using RT-PCR Primer: FIBP (h)-PR: sc-96425-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.