SANTA CRUZ BIOTECHNOLOGY, INC.

GDF-10 siRNA (h): sc-90476

BACKGROUND

Growth/differentiation factors (GDFs) are members of the TGF superfamily whose members are involved in embryonic development and adult tissue homeostasis. GDF-10 (growth differentiation factor 10), also known as BMP3B (bone morphogenetic protein 3B) or BIP, is a 478 amino acid secreted protein that belongs to the TGF superfamily. Expressed in lung, femur, brain, testis, pancreas and skeletal muscle, GDF-10 exists as a homodimer or a heterodimer that, characteristic of BMP proteins, contains a polybasic proteolytic processing site which is cleaved to produce a mature protein containing seven conserved cysteine residues. GDF-10 is thought to play a role in cell growth and differentiation and may be involved in skeletal morphogenesis.

REFERENCES

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7. Cagnard, N., et al. 2005. Interleukin-32, CCL2, PF4F1 and GFD10 are the only cytokine/chemokine genes differentially expressed by *in vitro* cultured rheumatoid and osteoarthritis fibroblast-like synoviocytes. Eur. Cytokine Netw. 16: 289-292.

CHROMOSOMAL LOCATION

Genetic locus: GDF10 (human) mapping to 10q11.22.

PRODUCT

GDF-10 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 GDF-10 shRNA Plasmid (h): sc-90476-SH and GDF-10 shRNA (h) Lentiviral Particles: sc-90476-V as alternate gene silencing products.

For independent verification of GDF-10 (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-90476A, sc-90476B and sc-90476C.

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

GDF-10 siRNA (h) is recommended for the inhibition of GDF-10 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 GDF-10 gene expression knockdown using RT-PCR Primer: GDF-10 (h)-PR: sc-90476-PR (20 µl, 588 bp). 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.