SANTA CRUZ BIOTECHNOLOGY, INC.

IGSF10 siRNA (h): sc-78252

BACKGROUND

Ig (immunoglobulin) superfamily members exhibit functional characteristics including immune responses, growth factor signaling and cell adhesion. IGSF10 (immunoglobulin superfamily, member 10), also known as Calvaria mechanical force protein 608 (CMF608), is a 2,623 amino acid secreted protein that contains an N-terminal signal peptide, 6 leucine-rich repeats (LRRs), and 12 immunoglobulin-like repeats. IGSF10 exists as multiple alternatively spliced isoforms, and is expressed in bone. Specifically, expression of IGSF10 is limited to mesenchymal osteochondroprogenitors with fibroblast-like morphology, where it is thought to be involved in the maintenance of the osteochondroprogenitor cells pool and its down-regulation precedes terminal differentiation. The gene encoding IGSF10 maps to chromosome 3, which comprises over 1,100 genes that include a chemokine receptor gene cluster as well as a variety of human cancer related loci.

REFERENCES

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2. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
3. Segev, O., et al. 2004. CMF608—a novel mechanical strain-induced bone-specific protein expressed in early osteochondroprogenitor cells. Bone 34: 246-260.
4. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. Genomics 83: 193-202.
5. Yue, Y., et al. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. Genomics 85: 36-47.
6. Darai, E., et al. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". Genomics 86: 1-12.
7. Yue, Y., et al. 2005. Genomic structure and paralogous regions of the inversion breakpoint occurring between human chromosome 3p12.3 and orangutan chromosome 2. Cytogenet. Genome Res. 108: 98-105.

CHROMOSOMAL LOCATION

Genetic locus: IGSF10 (human) mapping to 3q25.1.

PRODUCT

IGSF10 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 IGSF10 shRNA Plasmid (h): sc-78252-SH and IGSF10 shRNA (h) Lentiviral Particles: sc-78252-V as alternate gene silencing products.

For independent verification of IGSF10 (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-78252A, sc-78252B and sc-78252C.

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

IGSF10 siRNA (h) is recommended for the inhibition of IGSF10 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 IGSF10 gene expression knockdown using RT-PCR Primer: IGSF10 (h)-PR: sc-78252-PR (20 µl, 328 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.