SANTA CRUZ BIOTECHNOLOGY, INC.

OSTF1 siRNA (m): sc-151336

BACKGROUND

OSTF1 (osteoclast-stimulating factor 1) is a 214 amino acid cytoplasmic protein that contains three ANK repeats and one SH3 domain. The SH3 domain mediates interaction of OSTF1 with SMN. In addition to SMN, OSTF1 interacts with Src and FAS-L. In osteoclasts, OSTF1 is thought to induce bone resorption most likely through a signaling cascade that results in the secretion of factors that enhance osteoclast formation and activity. The gene that encdoes OSTF1 consists of almost 59,000 bases and maps to human chromosome 9q21.13. Housing over 900 genes, chromosome 9 comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

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2. Schaub, R., et al. 2000. Assignment of OSTF1 to human chromosome bands 12q24.1→q24.2 by *in situ* hybridization. Cytogenet. Cell Genet. 88: 87-88.
3. Kurihara, N., et al. 2001. Osteoclast-stimulating factor interacts with the spinal muscular atrophy gene product to stimulate osteoclast formation. J. Biol. Chem. 276: 41035-41039.
4. Li, M., et al. 2005. Crystallization and preliminary X-ray crystallographic analysis of osteoclast-stimulating factor. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 61: 128-130.
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CHROMOSOMAL LOCATION

Genetic locus: Ostf1 (mouse) mapping to 19 B.

PRODUCT

OSTF1 siRNA (m) 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 OSTF1 shRNA Plasmid (m): sc-151336-SH and OSTF1 shRNA (m) Lentiviral Particles: sc-151336-V as alternate gene silencing products.

For independent verification of OSTF1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-151336A, sc-151336B and sc-151336C.

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

OSTF1 siRNA (m) is recommended for the inhibition of OSTF1 expression in mouse 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.

GENE EXPRESSION MONITORING

OSTF1 (AT9G4): sc-517418 is recommended as a control antibody for monitoring of OSTF1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor OSTF1 gene expression knockdown using RT-PCR Primer: OSTF1 (m)-PR: sc-151336-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.

PROTOCOLS

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