SANTA CRUZ BIOTECHNOLOGY, INC.

Osteoadherin siRNA (m): sc-61266

BACKGROUND

Osteoadherin (OSAD) is a bone proteoglycan containing keratan sulfate that belongs to the small leucine-rich proteoglycan (SLRP) family. Osteoadherin promotes Integrin $\alpha v\beta 3$-mediated cell binding. The central region of Osteoadherin consists of 11 B-type, leucine-rich repeats ranging in length from 20 to 30 residues. The full, primary sequence of Osteoadherin contains four putative sites for tyrosine sulfation, three of which are at the N-terminal end of the molecule, six assumed sites for N-linked glycosylation, and a large and very acidic C-terminal domain, which is unique to Osteoadherin. Expression of Osteoadherin is limited to extracellular space and the extracellular matrix, as it is a secreted protein.

REFERENCES

1. Sommarin, Y., et al. 1998. Osteoadherin, a cell-binding keratan sulfate proteoglycan in bone, belongs to the family of leucine-rich repeat proteins of the extracellular matrix. J. Biol. Chem. 273: 16723-16729.
2. Wendel, M.,et al. 1998. Bone matrix proteins: isolation and characterization of a novel cell-binding keratan sulfate proteoglycan (osteoadherin) from bovine bone. J. Cell Biol. 141: 839-847.
3. Buchaille, R., et al. 2000. Expression of the small leucine-rich proteoglycan osteoadherin/osteomodulin in human dental pulp and developing rat teeth. Bone 27: 265-270.
4. Matsushima, N., et al. 2000. Super-motifs and evolution of tandem leucine-rich repeats within the small proteoglycans—biglycan, decorin, lumican, fibromodulin, PRELP, keratocan, osteoadherin, epiphycan, and osteoglycin. Proteins 38: 210-225.
5. Shen, Z., et al. 2000. Tissue distribution of a novel cell binding protein, osteoadherin, in the rat. Matrix Biol. 18: 533-542.
6. Lucchini, M., et al. 2002. TGF β 1 signaling and stimulation of osteoadherin in human odontobla *in vitro.* Connect. Tissue Res. 43: 345-353.

CHROMOSOMAL LOCATION

Genetic locus: Omd (mouse) mapping to 13 A5.

PRODUCT

Osteoadherin 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 Osteoadherin shRNA Plasmid (m): sc-61266-SH and Osteoadherin shRNA (m) Lentiviral Particles: sc-61266-V as alternate gene silencing products.

For independent verification of Osteoadherin (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-61266A, sc-61266B and sc-61266C.

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

Osteoadherin siRNA (m) is recommended for the inhibition of Osteoadherin 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Osteoadherin gene expression knockdown using RT-PCR Primer: Osteoadherin (m)-PR: sc-61266-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.