SANTA CRUZ BIOTECHNOLOGY, INC.

ODAM siRNA (h): sc-75989

BACKGROUND

ODAM (odontogenic ameloblast-associated protein), also known as APIN or FLJ20513, is a 279 amino acid secreted protein. Heavily O-glycosylated, ODAM is an epithelial protein that may have a role in odontogenesis, the process that results in generation of teeth. ODAM is also thought to be integrated into the enamel matrix at the end of the mineralization process during tooth formation. The ODAM protein has also been found to be the unique constituent of calcifying epithelial odontogenic tumors (CEOTs), also known as Pindborg tumors, which are benign yet locally aggressive pathologic entities commonly associated with an embedded or unerupted tooth. The gene that encodes ODAM maps to human chromosome 4q13.3.

REFERENCES

1. Solomon, A., et al. 2003. Calcifying epithelial odontogenic (Pindborg) tumor-associated amyloid consists of a novel human protein. J. Lab. Clin. Med. 142: 348-355.
2. Moffatt, P., et al. 2006. Identification of secreted and membrane proteins in the rat incisor enamel organ using a signal-trap screening approach. Eur. J. Oral Sci. 114 Suppl. 1: 139-146; discussion 164.
3. Murphy, C.L., et al. 2008. Odontogenic ameloblast-associated protein nature of the amyloid found in calcifying epithelial odontogenic tumors and unerupted tooth follicles. Amyloid 15: 89-95.
4. Moffatt, P., et al. 2008. Characterization of Apin, a secreted protein highly expressed in tooth-associated epithelia. J. Cell. Biochem. 103: 941-956.
5. Kestler, D.P., et al. 2008. Expression of odontogenic ameloblast-associated protein (ODAM) in dental and other epithelial neoplasms. Mol. Med. 14: 318-326.
6. Fenner, B.J., et al. 2010. Expanding the substantial interactome of NEMO using protein microarrays. PLoS ONE 5: e8799.

CHROMOSOMAL LOCATION

Genetic locus: ODAM (human) mapping to 4q13.3.

PRODUCT

ODAM 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 ODAM shRNA Plasmid (h): sc-75989-SH and ODAM shRNA (h) Lentiviral Particles: sc-75989-V as alternate gene silencing products.

For independent verification of ODAM (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-75989A, sc-75989B and sc-75989C.

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

ODAM siRNA (h) is recommended for the inhibition of ODAM 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 ODAM gene expression knockdown using RT-PCR Primer: ODAM (h)-PR: sc-75989-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.