SANTA CRUZ BIOTECHNOLOGY, INC.

OC-STAMP siRNA (m): sc-108975

BACKGROUND

Bone morphogenesis and remodeling involve the formation of bone from osteoblasts and the resorption of bone by osteoclasts, which are multinucleated bone resorbing giant cells. Poor bone reabsorption leads to a multitude of sclerotic diseases such as osteropetosis, whereas osteoporosis is caused by excessive bone reabsorption. OC-STAMP (osteoclast stimulatory transmembrane protein), also known as 4833422F24Rik, is a 498 amino acid multi-pass membrane protein that promotes osteoclast differentiation. Expressed in osteoclasts, OC-STAMP is considered a novel protein induced by RANKL, a member of the TNF-R (tumor necrosis factor receptor) superfamily that is considered an important regulator of T cells and osteoclasts. OC-STAMP is encoded by a gene located on mouse chromosome 2 H3.

REFERENCES

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7. Mensah, K.A., Ritchlin, C.T. and Schwarz, E.M. 2010. RANKL induces heterogeneous DC-STAMP(lo) and DC-STAMP(hi) osteoclast precursors of which the DC-STAMP(lo) precursors are the master fusogens. J. Cell. Physiol. 223: 76-83.

CHROMOSOMAL LOCATION

Genetic locus: Ocstamp (mouse) mapping to 2 H3.

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.

PRODUCT

OC-STAMP siRNA (m) is a pool of 2 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 OC-STAMP shRNA Plasmid (m): sc-108975-SH and OC-STAMP shRNA (m) Lentiviral Particles: sc-108975-V as alternate gene silencing products.

For independent verification of OC-STAMP (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-108975A and sc-108975B.

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

OC-STAMP siRNA (m) is recommended for the inhibition of OC-STAMP 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 OC-STAMP gene expression knockdown using RT-PCR Primer: OC-STAMP (m)-PR: sc-108975-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.