SANTA CRUZ BIOTECHNOLOGY, INC.

SCUBE3 siRNA (m): sc-106536

BACKGROUND

SCUBE3 (signal peptide, CUB domain, EGF-like 3), also known as CEGF3, is a novel secreted 993 amino acid cell-surface osteoblast protein that plays an important role in bone cell biology. While highly expressed in osteoblasts, SCUBE3 expression is unobservable or very low in non-bone tissues. SCUBE3 forms homo-oligomers and hetero-oligomers with SCUBE1, and may undergo C-terminal proteolytic cleavage or become N-glycosylated following translation. Two SCUBE3 isoforms exist as a result of alternative splicing events. SCUBE3 contains one CUB domain and nine EGF-like domains, and is encoded by a gene which maps to human chromosome 6p21.31, a region associated with a rare form of metabolic bone disease known as Paget's disease. Chromosome 6 contains 170 million base pairs and comprises nearly 6% of the human genome.

REFERENCES

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3. Wu, B.T., Su, Y.H., Tsai, M.T., Wasserman, S.M., Topper, J.N. and Yang, R.B. 2004. A novel secreted, cell-surface glycoprotein containing multiple epidermal growth factor-like repeats and one CUB domain is highly expressed in primary osteoblasts and bones. J. Biol. Chem. 279: 37485-37490.
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CHROMOSOMAL LOCATION

Genetic locus: Scube3 (mouse) mapping to 17 A3.3.

PRODUCT

SCUBE3 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 SCUBE3 shRNA Plasmid (m): sc-106536-SH and SCUBE3 shRNA (m) Lentiviral Particles: sc-106536-V as alternate gene silencing products.

For independent verification of SCUBE3 (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-106536A, sc-106536B and sc-106536C.

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

SCUBE3 siRNA (m) is recommended for the inhibition of SCUBE3 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

SCUBE3 (G-5): sc-514696 is recommended as a control antibody for monitoring of SCUBE3 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 SCUBE3 gene expression knockdown using RT-PCR Primer: SCUBE3 (m)-PR: sc-106536-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.