SANTA CRUZ BIOTECHNOLOGY, INC.

SCUBE3 (H-10): sc-514697

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Jacobs, J.W., et al. 1999. Paget's disease of the bones: diagnosis and treatment. Ned. Tijdschr. Geneeskd. 143: 719-725.
2. Yang, R.B., et al. 2002. Identification of a novel family of cell-surface proteins expressed in human vascular endothelium. J. Biol. Chem. 277: 46364-46373.
3. Wu, B.T., et al. 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.
4. Yang, H.Y., et al. 2007. Transgenic overexpression of the secreted, extracellular EGF-CUB domain-containing protein SCUBE3 induces cardiac hypertrophy in mice. Cardiovasc. Res. 75: 139-147.
5. Haworth, K., et al. 2007. Expression of the SCUBE3 epidermal growth factor-related gene during early embryonic development in the mouse. Gene Expr. Patterns 7: 630-634.
6. Indumathi, C.K., et al. 2009. Juvenile Paget's disease. Indian Pediatr. 46: 354-356.

CHROMOSOMAL LOCATION

Genetic locus: SCUBE3 (human) mapping to 6p21.31; Scube3 (mouse) mapping to 17 A3.3.

SOURCE

SCUBE3 (H-10) is a mouse monoclonal antibody raised against amino acids 398-489 mapping within an internal region of SCUBE3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

SCUBE3 (H-10) is recommended for detection of SCUBE3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SCUBE3 siRNA (h): sc-95189, SCUBE3 siRNA (m): sc-106536, SCUBE3 shRNA Plasmid (h): sc-95189-SH, SCUBE3 shRNA Plasmid (m): sc-106536-SH, SCUBE3 shRNA (h) Lentiviral Particles: sc-95189-V and SCUBE3 shRNA (m) Lentiviral Particles: sc-106536-V.

Molecular Weight of full length glycosylated SCUBE3: 130 kDa.

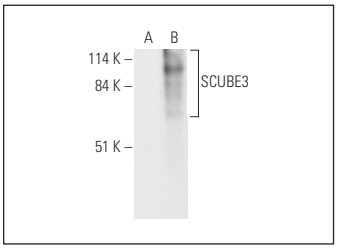
Molecular Weight of cleaved SCUBE3: 65 kDa.

Positive Controls: SCUBE3 (h): 293T Lysate: sc-177904.

RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



SCUBE3 (H-10): sc-514697. Western blot analysis of SCUBE3 expression in non-transfected: sc-117752 (**A**) and human SCUBE3 transfected: sc-177904 (**B**) 293T whole cell lysates.

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.