SANTA CRUZ BIOTECHNOLOGY, INC.

SCUBE2 (G-4): sc-398607

BACKGROUND

SCUBE2 (signal peptide, CUB domain, EGF-like 2), also known as CEGP1, Cegb1 or Cegf1, is a 999 amino acid protein that is ubiquitously expressed in adult tissues and belongs to the evolutionarily conserved SCUBE protein family. Containing a CUB domain and nine EGF-like domains, SCUBE2 manifests as a secreted surface-anchored glycoprotein when overexpressed and is considered a novel component of the HH (Hedgehog) signal. The HH signal plays a pivotal role in induction of ventral neuronal and muscle cell types around the midline during vertebrate development. It is suggested that SCUBE2 expression is important in breast cancer progression and may serve as a useful prognostic marker. SCUBE2 forms homo-oligomers and hetero-oligomers with SCUBE1 and SCUBE3. Expressed as three isoforms produced by alternative splicing events, SCUBE2 is encoded by a gene located on human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Grimmond, S., et al. 2001. Expression of a novel mammalian epidermal growth factor-related gene during mouse neural development. Mech. Dev. 102: 209-211.
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. Kawakami, A., et al. 2005. The zebrafish-secreted matrix protein you/SCUBE2 is implicated in long-range regulation of Hedgehog signaling. Curr. Biol. 15: 480-488.
4. Woods, I.G. and Talbot, W.S. 2005. The you gene encodes an EGF-CUB protein essential for Hedgehog signaling in zebrafish. PLoS Biol. 3: e66.
5. Hollway, G.E., et al. 2006. SCUBE2 mediates Hedgehog signalling in the zebrafish embryo. Dev. Biol. 294: 104-118.

CHROMOSOMAL LOCATION

Genetic locus: SCUBE2 (human) mapping to 11p15.4.

SOURCE

SCUBE2 (G-4) is a mouse monoclonal antibody raised against amino acids 570-639 mapping within an internal region of SCUBE2 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.

SCUBE2 (G-4) is available conjugated to agarose (sc-398607 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398607 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398607 PE), fluorescein (sc-398607 FITC), Alexa Fluor® 488 (sc-398607 AF488), Alexa Fluor® 546 (sc-398607 AF546), Alexa Fluor® 594 (sc-398607 AF594) or Alexa Fluor® 647 (sc-398607 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398607 AF680) or Alexa Fluor® 790 (sc-398607 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SCUBE2 (G-4) is recommended for detection of SCUBE2 of 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 SCUBE2 siRNA (h): sc-96423, SCUBE2 shRNA Plasmid (h): sc-96423-SH and SCUBE2 shRNA (h) Lentiviral Particles: sc-96423-V.

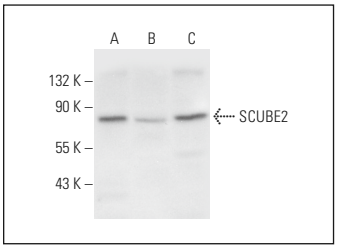
Molecular Weight of SCUBE2: 110 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241, Hep G2 cell lysate: sc-2227 or MDA-MB-435S whole cell lysate: sc-364184.

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



SCUBE2 (G-4): sc-398607. Western blot analysis of SCUBE2 expression in ZR-75-1 (**A**), Hep G2 (**B**) and MDA-MB-435S (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sheng, J., et al. 2019. The inhibitory effect of (-)-epigallocatechin-3-gallate on breast cancer progression via reducing SCUBE2 methylation and DNMT activity. Molecules 24: 2899.

STORAGE

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

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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