SANTA CRUZ BIOTECHNOLOGY, INC.

SCAMP2 (8C10): sc-58286

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Secretory carrier membrane proteins (SCAMPs) are components of the post-Golgi membranes and are invovled in endocytosis, vesicle recycling and membrane trafficking. The structural features of SCAMPs include multiple N-terminal NPF repeats and four highly conserved transmembrane regions. These NPF repeats frequently interact with EH domain proteins and aid in the budding of transport vesicles from the plasma membrane or the Golgi complex. Endocytic budding at the plasma membrane and vesicle budding at the *trans*-Golgi complex facilitates binding of SCAMP proteins to EH domain proteins. SCAMPs exist as distinct but related proteins that include SCAMP1, SCAMP2 and SCAMP3. Tyrosine phosphorylation by the epidermal growth factor receptor of SCAMP1 and SCAMP3 suggests that SCAMPs are regulated by phosphorylation. Although SCAMPs are ubiquitously expressed throughout all tissue, in neural tissue the synaptic vesicles express a particularly high concentration of SCAMP1.

REFERENCES

1. Brand, S.H., et al. 1991. Secretory carrier membrane proteins 31-35 define a common protein composition among secretory carrier membranes. J. Biol. Chem. 266: 18949-18957.
2. Brand, S.H. and Castle, J.D. 1993. SCAMP 37, a new marker within the general cell surface recycling system. EMBO J. 12: 3753-3761.
3. Laurie, S.M., et al. 1993. The glucose transporter GluT4 and secretory carrier membrane proteins (SCAMPs) colocalize in rat adipocytes and partially segregate during Insulin stimulation. J. Biol. Chem. 268: 19110-19117.
4. Wu, T.T. and Castle, J.D. 1997. Evidence for co-localization and interaction beween 37 and 39 kDa isoforms of secretory carrier membrane proteins (SCAMPs). J. Cell Sci. 110: 1533-1541.
5. DeBeer, T., et al. 1998. Structure and Asn-Pro-Phe binding pocket of the Eps15 homology domain. Science 281: 1357-1360.
6. Paoluzi, S., et al. 1998. Recognition specificity of individual EH domains of mammals and yeast. EMBO J. 17: 6541-6550.

CHROMOSOMAL LOCATION

Genetic locus: SCAMP2 (human) mapping to 15q24.1; Scamp2 (mouse) mapping to 9 B.

SOURCE

SCAMP2 (8C10) is a mouse monoclonal antibody raised against purified Insulin-responsive glucose transporter vesicles of human origin.

PRODUCT

Each vial contains 200 µg IgM 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

SCAMP2 (8C10) is recommended for detection of SCAMP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for SCAMP2 siRNA (h): sc-41292, SCAMP2 siRNA (m): sc-41293, SCAMP2 shRNA Plasmid (h): sc-41292-SH, SCAMP2 shRNA Plasmid (m): sc-41293-SH, SCAMP2 shRNA (h) Lentiviral Particles: sc-41292-V and SCAMP2 shRNA (m) Lentiviral Particles: sc-41293-V.

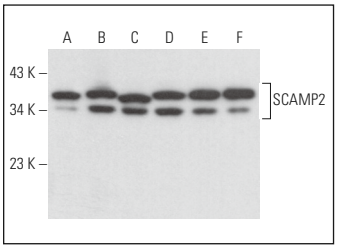
Molecular Weight of SCAMP2: 39 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, MCF7 whole cell lysate: sc-2206 or Hep G2 cell lysate: sc-2227.

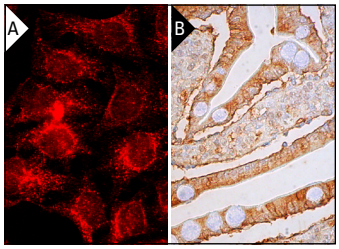
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



SCAMP2 (8C10): sc-58286. Western blot analysis of SCAMP2 expression in Hep G2 (**A**), U-251-MG (**B**), MCF7 (**C**), c4 (**D**), RAW 264.7 (**E**) and M1 (**F**) whole cell lysates.



SCAMP2 (8C10): sc-58286. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (**B**).

SELECT PRODUCT CITATIONS

1. Diering, G.H., et al. 2009. Secretory carrier membrane protein 2 regulates cell-surface targeting of brain-enriched Na^+/H^+ exchanger NHE5. J. Biol. Chem. 284: 13892-13903.

RESEARCH USE

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