

SCAMP1 (D-1): sc-398154

BACKGROUND

Secretory carrier membrane proteins (SCAMPs) are components of the post Golgi membranes and are involved 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

- 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.
- Brand, S.H., et al. 1993. SCAMP 37, a new marker within the general cell surface recycling system. *EMBO J.* 12: 3753-3761.
- 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.
- Wu, T.T., et al. 1997. Evidence for colocalization and interaction between 37 and 39 kDa isoforms of secretory carrier membrane proteins (SCAMPs). *J. Cell Sci.* 110: 1533-1541.
- Wu, T.T., et al. 1998. Tyrosine phosphorylation of selected secretory carrier membrane proteins, SCAMP1 and SCAMP3, and association with the EGF receptor. *Mol. Biol. Cell* 9: 1661-1674.

CHROMOSOMAL LOCATION

Genetic locus: SCAMP1 (human) mapping to 5q14.1; Scamp1 (mouse) mapping to 13 D1.

SOURCE

SCAMP1 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 9-30 at the N-terminus of SCAMP1 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.

Blocking peptide available for competition studies, sc-398154 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SCAMP1 (D-1) is recommended for detection of SCAMP1 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).

SCAMP1 (D-1) is also recommended for detection of SCAMP1 in additional species, including canine, porcine and avian.

Suitable for use as control antibody for SCAMP1 siRNA (h): sc-41290, SCAMP1 siRNA (m): sc-41291, SCAMP1 shRNA Plasmid (h): sc-41290-SH, SCAMP1 shRNA Plasmid (m): sc-41291-SH, SCAMP1 shRNA (h) Lentiviral Particles: sc-41290-V and SCAMP1 shRNA (m) Lentiviral Particles: sc-41291-V.

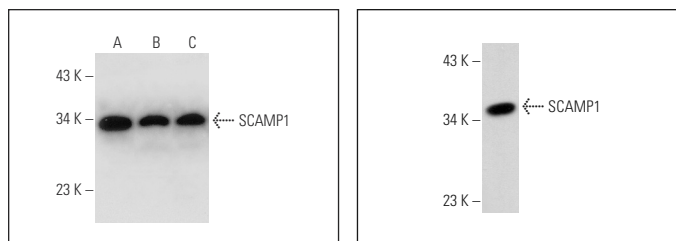
Molecular Weight of SCAMP1: 37 kDa.

Positive Controls: human brain hippocampus extract: sc-364375, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

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



SCAMP1 (D-1): sc-398154. Western blot analysis of SCAMP1 expression in mouse brain (A), human brain (B) and human hippocampus (C) tissue extracts.

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.