

Flotillin-1 (C-20): sc-16642

BACKGROUND

Lipid rafts are sphingolipid- and cholesterol-rich membrane microdomains that are insoluble in nonionic detergents. Lipid rafts are important for numerous cellular processes, including signal transduction, membrane trafficking and molecular sorting. Flotillins are lipid raft components in neurons and caveolae-associated proteins in A498 kidney cells. Flotillin-1 belongs to the band 7.2/stomatin protein family, whose members are characterized by the presence of a hydrophobic N-terminal region that is predicted to form a single, outside to inside, transmembrane domain. Flotillin-1 and -2 have complementary tissue distributions and their expression levels are independently regulated. At the cellular level, Flotillin-2 is ubiquitously expressed, whereas Flotillin-1 is expressed in A498 kidney cells, muscle cell lines and fibroblasts. Flotillins form a ternary complex with CAP and Cbl, directing the localization of the CAP-Cbl complex to a lipid raft subdomain of the plasma membrane. Association of ER-X with Flotillin localizes ER-X within plasma membrane caveolae and mediates rapid oestrogen activation of the MAP kinase cascade. The expression of the flotillins is also correlated to the progression of Alzheimer pathology.

REFERENCES

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- Kobubo, H., et al. 2000. Localization of flotillins in human brain and their accumulation with the progression of Alzheimer's disease pathology. *Neurosci. Lett.* 290: 93-96.
- Baumann, C.A., et al. 2000. CAP defines a second signalling pathway required for Insulin-stimulated glucose transport. *Nature* 407: 202-207.
- Toran-Allerand, C.D. 2000. Novel sites and mechanisms of oestrogen action in the brain. *Novartis Found Symp.* 230: 56-69.
- Salzer, U., et al. 2001. Stomatin, Flotillin-1, and Flotillin-2 are major integral proteins of erythrocyte lipid rafts. *Blood* 97: 1141-1143.
- Dermine, J.F., et al. 2001. Flotillin-1-enriched lipid raft domains accumulate on maturing phagosomes. *J. Biol. Chem.* 276: 18507-18512.

CHROMOSOMAL LOCATION

Genetic locus: FLOT1 (human) mapping to 6p21.33; Flot1 (mouse) mapping to 17 B1.

SOURCE

Flotillin-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Flotillin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16642 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Flotillin-1 (C-20) is recommended for detection of Flotillin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Flotillin-1 (C-20) is also recommended for detection of Flotillin-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Flotillin-1 siRNA (h): sc-35391, Flotillin-1 siRNA (m): sc-35392, Flotillin-1 shRNA Plasmid (h): sc-35391-SH, Flotillin-1 shRNA Plasmid (m): sc-35392-SH, Flotillin-1 shRNA (h) Lentiviral Particles: sc-35391-V and Flotillin-1 shRNA (m) Lentiviral Particles: sc-35392-V.

Molecular Weight of Flotillin-1: 47 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Xue, M., et al. 2004. N-formyl peptide receptors cluster in an active raft-associated state prior to phosphorylation. *J. Biol. Chem.* 279: 45175-45184.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Flotillin-1 (C-2): sc-74566** or **Flotillin-1 (C-7): sc-133153**, our highly recommended monoclonal alternatives to Flotillin-1 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Flotillin-1 (C-2): sc-74566**.