

Flotillin-2 (h): 293T Lysate: sc-176406

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-2, also designated epidermal surface antigen, is conserved in all mammalian species. 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. Stable transfection of a Flotillin-2 fusion protein in COS cells induces filopodia formation and changes epithelial cells to a neuronal appearance. 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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- Volonte, D., et al. 1999. Flotillins/cavatellins are differentially expressed in cells and tissues and form a hetero-oligomeric complex with caveolins *in vivo*. Characterization and epitope-mapping of a novel Flotillin-1 monoclonal antibody probe. *J. Biol. Chem.* 274: 12702-12709.
- Hazarika, P., et al. 1999. Flotillin-2 is distinct from epidermal surface antigen (ESA) and is associated with filopodia formation. *J. Cell. Biochem.* 75: 147-159.
- 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.
- 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.
- Salzer, U. and Prohaska, R. 2001. Stomatins, 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: FLOT2 (human) mapping to 17q11.2.

PRODUCT

Flotillin-2 (h): 293T Lysate represents a lysate of human Flotillin-2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Flotillin-2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Flotillin-2 antibodies. Recommended use: 10-20 µl per lane.

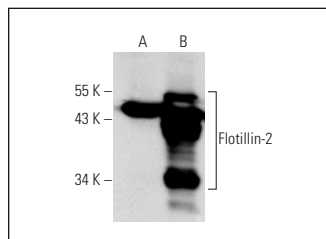
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Flotillin-2 (A-3): sc-48398 is recommended as a positive control antibody for Western Blot analysis of enhanced human Flotillin-2 expression in Flotillin-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

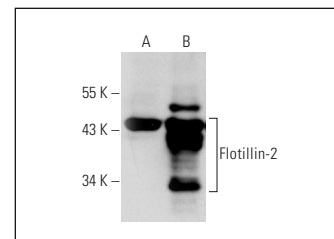
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Flotillin-2 (A-3): sc-48398. Western blot analysis of Flotillin-2 expression in non-transfected: sc-117752 (A) and human Flotillin-2 transfected: sc-176406 (B) 293T whole cell lysates.



Flotillin-2 (B-6): sc-28320. Western blot analysis of Flotillin-2 expression in non-transfected: sc-117752 (A) and human Flotillin-2 transfected: sc-176406 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.