

Flotillin-2 (A-3): sc-48398

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.

CHROMOSOMAL LOCATION

Genetic locus: FLOT2 (human) mapping to 17q11.2; Flot2 (mouse) mapping to 11 B5.

SOURCE

Flotillin-2 (A-3) is a mouse monoclonal antibody raised against amino acids 151-240 of Flotillin-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Flotillin-2 (A-3) is recommended for detection of Flotillin-2 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), immunohistochemistry (including paraffin-embedded sections) (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-2 (A-3) is also recommended for detection of Flotillin-2 in additional species, including canine.

Suitable for use as control antibody for Flotillin-2 siRNA (h): sc-35393, Flotillin-2 siRNA (m): sc-35394, Flotillin-2 shRNA Plasmid (h): sc-35393-SH, Flotillin-2 shRNA Plasmid (m): sc-35394-SH, Flotillin-2 shRNA (h) Lentiviral Particles: sc-35393-V and Flotillin-2 shRNA (m) Lentiviral Particles: sc-35394-V.

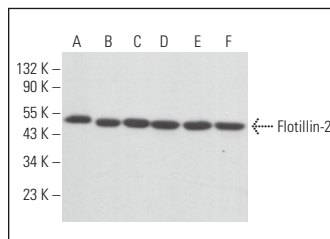
Molecular Weight of Flotillin-2: 42 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287, Sol8 cell lysate: sc-2249 or c4 whole cell lysate: sc-364186.

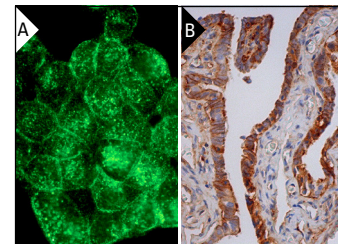
STORAGE

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

DATA



Flotillin-2 (A-3): sc-48398. Western blot analysis of Flotillin-2 expression in HeLa (A), SJRH30 (B), Sol8 (C), C2C12 (D), c4 (E) and L6 (F) whole cell lysates.



Flotillin-2 (A-3): sc-48398. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Lecce, L., et al. 2013. ICAM-2 and lipid rafts disappear from the basal plasma membrane of uterine epithelial cells during early pregnancy in rats. *Cell Tissue Res.* 353: 563-573.
2. Kajimoto, T., et al. 2013. Ongoing activation of sphingosine 1-phosphate receptors mediates maturation of exosomal multivesicular endosomes. *Nat. Commun.* 4: 2712.
3. Mohamed, N.N.I., et al. 2018. Essential role of sphingosine kinase 2 in the regulation of cargo contents in the exosomes from K562 cells. *Kobe J. Med. Sci.* 63: E123-E129.
4. Simone, L., et al. 2022. AQP4-dependent glioma cell features affect the phenotype of surrounding cells via extracellular vesicles. *Cell Biosci.* 12: 150.
5. Abousawan, J., et al. 2023. HER2 expression defines unique requirements for flotillin and c-Src in EGFR signaling. *J. Cell Sci.* 136: jcs260133.

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.



See **Flotillin-2 (B-6): sc-28320** for Flotillin-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.