

Flotillin-2 (B-6): sc-28320

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

- Schroeder, W.T., et al. 1994. Cloning and characterization of a novel epidermal cell surface antigen (ESA). *J. Biol. Chem.* 269: 19983-19991.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

Flotillin-2 (B-6) 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.

Flotillin-2 (B-6) is available conjugated to agarose (sc-28320 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28320 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28320 PE), fluorescein (sc-28320 FITC), Alexa Fluor® 488 (sc-28320 AF488), Alexa Fluor® 546 (sc-28320 AF546), Alexa Fluor® 594 (sc-28320 AF594) or Alexa Fluor® 647 (sc-28320 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28320 AF680) or Alexa Fluor® 790 (sc-28320 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

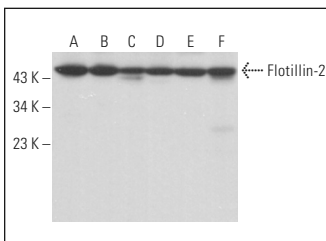
Flotillin-2 (B-6) is recommended for detection of Flotillin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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).

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.

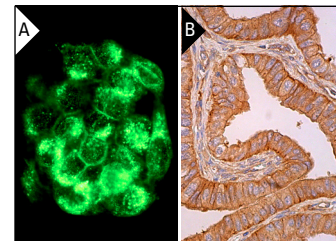
Molecular Weight of Flotillin-2: 42 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, WI-38 whole cell lysate: sc-364260 or AMJ2-C8 whole cell lysate: sc-364366.

DATA



Flotillin-2 (B-6): sc-28320. Western blot analysis of Flotillin-2 expression in Hep G2 (A), WI-38 (B), Ramos (C), WEHI-231 (D) and AMJ2-C8 (E) whole cell lysates and rat spleen tissue extract (F).



Flotillin-2 (B-6): sc-28320. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Hekman, M., et al. 2006. Reversible membrane interaction of BAD requires two C-terminal lipid binding domains in conjunction with 14-3-3 protein binding. *J. Biol. Chem.* 281: 17321-17336.
- de Andrade Mello, P., et al. 2017. Hyperthermia and associated changes in membrane fluidity potentiate P2X7 activation to promote tumor cell death. *Oncotarget* 8: 67254-67268.
- Chopard, C., et al. 2018. Cyclophilin A enables specific HIV-1 Tat palmitoylation and accumulation in uninfected cells. *Nat. Commun.* 9: 2251.
- Hudák, A., et al. 2019. Contribution of syndecans to cellular uptake and fibrillation of α -synuclein and Tau. *Sci. Rep.* 9: 16543.
- Xu, Z., et al. 2020. Flotillin-2 predicts poor prognosis and promotes tumor invasion in intrahepatic cholangiocarcinoma. *Oncol. Lett.* 19: 2243-2250.

RESEARCH USE

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

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