SANTA CRUZ BIOTECHNOLOGY, INC.

Flotillin-2 (H-90): sc-25507

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 caveloae-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 caveloae and mediates rapid oestrogen activation of the MAP kinase cascade. The expression of the flotillins is also correlated to the progression of Alzhemier pathology.

CHROMOSOMAL LOCATION

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

SOURCE

Flotillin-2 (H-90) is a rabbit polyclonal antibody raised against amino acids 151-240 of Flotillin-2 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.

Available as agarose conjugate for immunoprecipitation, sc-25507 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Flotillin-2 (H-90) is recommended for detection of Flotillin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 (H-90) is also recommended for detection of Flotillin-2 in additional species, including equine, canine, bovine, porcine and avian.

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.

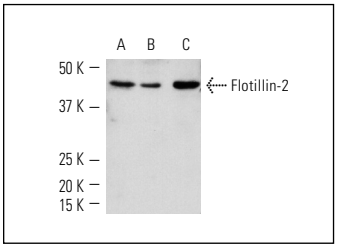
Molecular Weight of Flotillin-2: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-375 cell lysate: sc-3811 or CCD-1064Sk cell lysate: sc-2263.

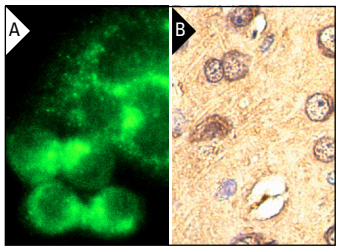
STORAGE

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

DATA



Flotillin-2 (H-90): sc-25507. Western blot analysis of Flotillin-2 expression in A-375 (**A**), HeLa (**B**) and CCD-1064Sk (**C**) whole cell lysates.



Flotillin-2 (H-90): sc-25507. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing membrane localization (**B**).

SELECT PRODUCT CITATIONS

1. Musch, M.W., et al. 2004. Hypotonicity-induced exocytosis of the skate anion exchanger skAE1: role of lipid raft regions. J. Biol. Chem. 279: 39447-39453.
2. McCaffrey, G., et al. 2007. Tight junctions contain oligomeric protein assembly critical for maintaining blood-brain barrier integrity *in vivo*. J. Neurochem. 103: 2540-2555.
3. Latif, R., et al. 2007. Lipid rafts are triage centers for multimeric and monomeric thyrotropin receptor regulation. Endocrinology 148: 3164-3175.
4. Tamma, G., et al. 2008. Functional involvement of Annexin-2 in cAMP induced AQP2 trafficking. Pflugers Arch. 456: 729-736.
5. Rossy, J., et al. 2009. Flotillins interact with PSGL-1 in neutrophils and, upon stimulation, rapidly organize into membrane domains subsequently accumulating in the uropod. PLoS ONE 4: e5403.
6. Terruzzi, I., et al. 2010. Insulin-mimetic action of conglutin-γ, a lupin seed protein, in mouse myoblasts. Nutr. Metab. Cardiovasc. Dis. 21: 197-205.
7. Carmosino, M., et al. 2010. MAL/VIP17, a new player in the regulation of NKCC2 in the kidney. Mol. Biol. Cell 21: 3985-3997.
8. Affentranger, S., et al. 2011. Dynamic reorganization of flotillins in chemokine-stimulated human T-lymphocytes. BMC Cell Biol. 12: 28.

RESEARCH USE

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