

# Flotillin-2 (A-16): sc-30750

## 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.
- 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Flotillin-2 (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-30750 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Flotillin-2 (A-16) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

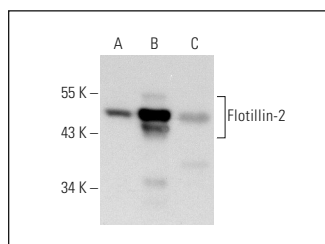
Flotillin-2 (A-16) is also recommended for detection of Flotillin-2 in additional species, including equine, canine, bovine, porcine and avian.

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.

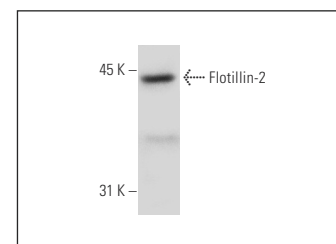
Molecular Weight of Flotillin-2: 42 kDa.

Positive Controls: Flotillin-2 (h): 293T Lysate: sc-176406, HeLa whole cell lysate: sc-2200 or CCD-1064Sk cell lysate: sc-2263.

## DATA



Flotillin-2 (A-16): sc-30750. Western blot analysis of Flotillin-2 expression in non-transfected 293T: sc-117752 (A), human Flotillin-2 transfected 293T: sc-176406 (B) and CCD-1064Sk (C) whole cell lysates.



Flotillin-2 (A-16): sc-30750. Western blot analysis of Flotillin-2 expression in HeLa whole cell lysate.

## RESEARCH USE

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

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Flotillin-2 (B-6): sc-28320** or **Flotillin-2 (A-3): sc-48398**, our highly recommended monoclonal alternatives to Flotillin-2 (A-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Flotillin-2 (B-6): sc-28320**.