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## Product Information

### Anti-Flotillin 2 (C-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **F1680**

#### Product Description

Anti-Flotillin 2 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 415-428 of human flotillin 2 with an N-terminal added cysteine, conjugated to KLH (GeneID: 2319). The corresponding sequence differs by two amino acids in rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Flotillin 2 (C-terminal) recognizes human flotillin 2. Applications include immunoblotting (~ 48 kDa) and immunofluorescence. Detection of the flotillin 2 band by immunoblotting is specifically inhibited with the immunizing peptide.

Flotillins are lipid raft-associated proteins involved in various cellular processes such as endocytosis, phagocytosis, neuronal regeneration and insulin signaling.<sup>1,2</sup> Lipid raft microdomains are glycosphingolipid- and cholesterol-rich membrane organized, dynamic structures connected to the cytoskeleton. Lipid raft domains are insoluble in non-ionic detergents, have a low buoyant density and contain proteins such as Src family kinases, glycosylphosphatidylinositol (GPI)-linked proteins, caveolins, sphingolipids, and cholesterol. Lipid rafts have a central role in cellular organization, membrane trafficking and signaling events.<sup>3,4</sup> The flotillin protein family consists of two proteins, flotillin 1 and 2, also named reggie-2 and -1, respectively. Flotillins belong to a larger family of integral membrane proteins that contain an evolutionarily conserved domain called the prohibitin homology (PHB) domain or SPFH domain (stomatin/prohibitin/flotillin/HflK/C domain). It has been suggested that the PHB domain constitutes a lipid recognition motif which can target proteins to the plasma membrane.<sup>2,4</sup> The association of flotillin 1 to the plasma membrane depends on palmitoylation in a conserved Cys<sup>34</sup> residue, whereas the association of flotillin 2 depends on both myristoylation and palmitoylation.<sup>2,5</sup>

The flotillin proteins are conserved and ubiquitously expressed. Flotillin 1 and 2 show a complementary tissue distribution. Flotillin 1 is mainly expressed in striated muscle tissues, adipose tissue, and lung. Flotillin 2 is more widely distributed, but is absent in skeletal muscle.<sup>6</sup>

Flotillin 2 over expression is associated with melanoma progression and transformation of SB2 melanoma cells to a highly metastatic line. It is also associated with expression of the thrombin receptor, PAR-1, that is implicated in cell growth and metastasis.<sup>7</sup> Flotillin 2 may be used as a marker protein for lipid raft microdomains.

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as preservative.

Antibody concentration: ~1 mg/mL

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/mL is recommended using whole extract of human HeLa cells.

Indirect immunofluorescence: a working concentration of 5-10 µg/mL is recommended by staining human HEK-293T cells.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

#### References

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