Technical Data Sheet

Purified Mouse anti-Caveolin 2 (pY27)

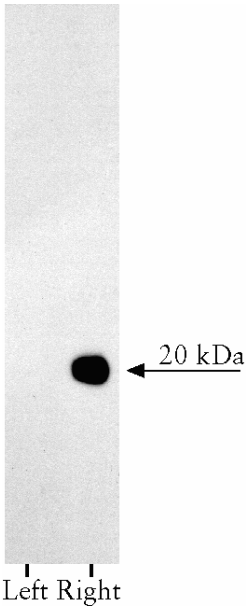
Product Information

Catalog Number:	**558364**
Size:	0.1 mg
Concentration:	0.25 mg/ml
Clone:	40/Caveolin 2
Immunogen:	Phosphorylated Human Caveolin 2
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	Human
Target Molecular Weight for WB/IP:	20 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

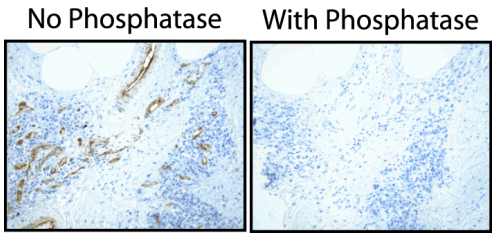
Description

The caveolins are a family of transmembrane proteins that are required for the structural integrity and functions of non-clathrin membrane invaginations (caveolae) on the inner surface of the plasma membrane. The intracellular functions of caveolae include roles in cholesterol homeostasis, signal transduction, and vesicle transport. Caveolins 1 and 2 form hetero-oligomers in the endoplasmic reticulum, Golgi complex and trans-Golgi-derived transport vesicles in most tissues. The highest levels of these complexes are found in adipocytes, fibroblasts, and endothelial, epithelial, and smooth muscle cells. Upon phosphorylation at tyrosine 19 or 27, caveolin 2 dissociates from caveolin 1, and the two phosphorylated forms of caveolin 2 localize to distinct areas of the cell. There are reports that internalization of caveolae may be regulated by tyrosine phosphorylation of caveolin 2.

The 40/Caveolin 2 monoclonal antibody recognizes the phosphorylated tyrosine 27 (pY27) of caveolin 2.



Western blot analysis of Caveolin 2 (pY27) in human endothelial cells. *Lysates from pervanadate-stimulated endothelial cells (Cat. No. 611667) were either treated with 50 µg/ml alkaline phosphatase (ICN Biomedicals) for 30 minutes at 37°C (left lane) or untreated (right lane), then probed with purified 40/Caveolin 2 mAb at 0.5 µg/ml. Caveolin 2 (pY27) is identified as a band of 20 kDa in the untreated lysate.*



Caveolin 2 (pY27) staining on tonsil. *Fresh human tonsil was incubated in 5 mM Pervanadate solution for 2 hours, then fixed in formalin and processed. Following antigen retrieval with BD Retrievagen A buffer (Cat. no. 550524), the sections were either left untreated (left panel) or treated with a phosphatase to eliminate all phosphorylation (right panel). The tissue sections were stained with purified Mouse anti-Caveolin 2 (pY27) with Hematoxylin counterstaining. Original magnification: 20X.*

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody should be kept at -20°C for long term storage, and it may be kept at 4°C for short term storage.

Application Notes

Application

Western blot	Tested
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development
Fluorescence microscopy	Reported

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Conner SD, Schmid SL. Regulated portals of entry into the cell. *Nature.* 2003; 422:37-44. (Biology)

Wang XB, Lee H, Capozza F, et al. Tyrosine phosphorylation of caveolin-2 at residue 27: differences in the spatial and temporal behavior of phospho-Cav-2 (pY19 and pY27). *Biochemistry.* 2004; 43:13694-13706. (Immunogen)

Williams TM, Lisanti MP. The caveolin proteins. *Genome Biol.* 2004; 5:214.1-214.7. (Biology)

Zaas DW, Duncan MJ, Li G, Wright JR, Abraham SN. Pseudomonas invasion of type I pneumocytes is dependent on the expression and phosphorylation of caveolin-2. *J Biol Chem.* 2005; 280:4864-4872. (Biology)