

Technical Data Sheet

Purified Mouse Anti-Caveolin 1

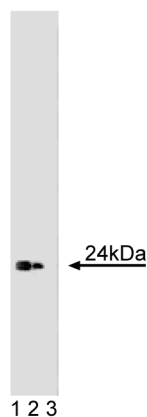
Product Information

Material Number:	610407
Size:	150 µg
Concentration:	250 µg/ml
Clone:	2297/Caveolin 1
Immunogen:	RSV-CEF Caveolin aa. 1-178
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Chicken, Dog, Mouse, Rat
Target MW:	21-24 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

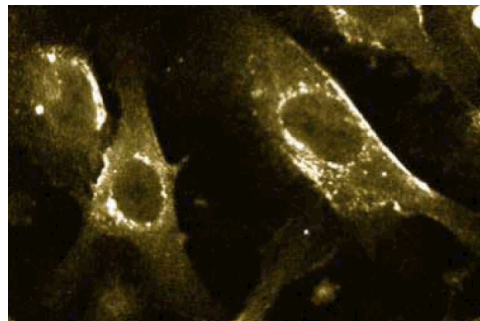
Description

Identified as a tyrosine phosphorylated protein in Rous sarcoma virus-transformed chick embryo fibroblasts (CEF), caveolin is now known to be ubiquitously expressed. Caveolin (also known as VIP21) localizes to non-clathrin membrane invaginations (caveolae) on the inner surface of the plasma membrane. This transmembrane protein plays a structural role in these specializations. Caveolin is also present at the trans-Golgi network (TGN) and similar quantities are found in apically and basolaterally destined transport vesicles. Caveolin is part of a complex containing glycosylphosphatidylinositol (GPI)-linked molecules and cytoplasmic signaling proteins. Caveolin is a transmembrane adaptor molecule that can simultaneously recognize GPI-linked proteins and interact with downstream cytoplasmic signaling molecules, such as c-yes, Annexin II, and hetero-trimeric G proteins. Caveolin-1 can generate two forms, α and β , due to alternate splicing of the mRNA. The α isoform has been reported to be observed at 24 kD and the β isoform at 21 kD. Caveolin-1 forms large lipid-binding homo-oligomers which are believed to play a role in caveolae formation. It may also function as a scaffolding protein which concentrates and organizes signaling molecules, a role supported by the fact that caveolin-1 interacts directly with inactive Ras and G-protein α subunits.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Caveolin 1 on a human endothelial cell lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the mouse anti-caveolin 1 antibody.



Immunofluorescence with the mouse anti-caveolin 1 antibody on human endothelial cells.

Preparation and Storage

Store undiluted at -20° C.

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

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611450	Human Endothelial Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.

References

Breton S, Lisanti MP, Tyszkowski R, McLaughlin M, Brown D. Basolateral distribution of caveolin-1 in the kidney. Absence from H⁺-atpase-coated endocytic vesicles in intercalated cells. *J Histochem Cytochem.* 1998; 46(2):205-214.(Clone-specific: Immunohistochemistry, Western blot)

Conrad PA, Smart EJ, Ying YS, Anderson RG, Bloom GS. Caveolin cycles between plasma membrane caveolae and the Golgi complex by microtubule-dependent and microtubule-independent steps. *J Cell Biol.* 1995; 131(1):1421-1433.(Biology)

Galbiati F, Volonte D, Brown AM, et al. Caveolin-1 expression inhibits Wnt/beta-catenin/Lef-1 signaling by recruiting beta-catenin to caveolae membrane domains. *J Biol Chem.* 2000; 275(30):23368-23377.(Clone-specific: Western blot)

Ushio-Fukai M, Hilenski L, Santanam N, et al. Cholesterol depletion inhibits epidermal growth factor receptor transactivation by angiotensin II in vascular smooth muscle cells: role of cholesterol-rich microdomains and focal adhesions in angiotensin II signaling. *J Biol Chem.* 2001; 276(51):48269-48275.(Clone-specific: Immunoprecipitation, Western blot)

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