

Store at
-20°C

Cavin-1 (D1P6W) Rabbit mAb

#69036

100 µl (10 western blots)

Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/supportOrders: 877-616-2355 (U.S.)
orders@cellsignal.comEntrez-Gene ID #284119
UniProt ID #Q6NZI2

New 06/15

For Research Use Only. Not For Use In Diagnostic Procedures.**Applications**
W, IP, IHC-P, IF-IC
Endogenous**Species Cross-Reactivity***
H**Molecular Wt.**
50 kDa**Isotype**
Rabbit IgG**

Background: Caveolae ("little caves") are 60-80 nm pits representing specialized plasma membrane domains in many cell types. The principal protein component of caveolae is caveolin, a small integral membrane protein composed of three family members, including the widely expressed caveolin-1 and -2, and the muscle-specific caveolin-3 (1). Caveolin proteins are required for caveolae formation and serve as scaffolding proteins for the recruitment of signaling proteins. Research studies in caveolin-deficient mice implicate caveolin proteins in several pathologies, including diabetes, cancer, cardiovascular diseases, atherosclerosis, pulmonary disease, and muscular dystrophies (2).

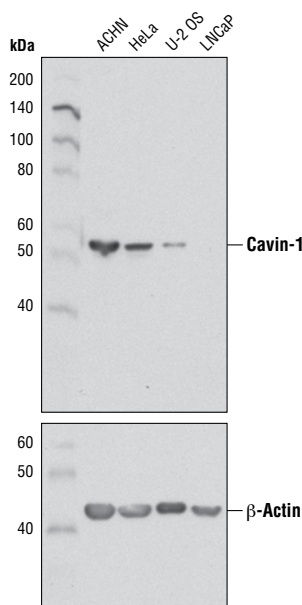
The cavin proteins (cavin-1, -2, -3, and -4 in mammals) are a family of caveolae-associated integral membrane proteins involved in the biogenesis and stability of caveolae. Cavin proteins form homo- or hetero-oligomers whose composition is tissue-specific, which may confer distinct functions of caveolae in various tissues (3). Cavin-1 (PTRF), which is widely expressed, is required for caveolae formation and is thought to play roles in lipid metabolism, adipocyte differentiation, and IGF-1 receptor signaling (4-6). Research studies involving prostate cancer suggest that expression of cavin-1 is related to tumor progression and angiogenesis/lymphangiogenesis (7-8).

Specificity/Sensitivity: Cavin-1 (D1P6W) Rabbit mAb recognizes endogenous levels of total cavin-1 protein. Based on the sequence of the immunogenic peptide, this antibody is not expected to cross-react with other cavin family members.

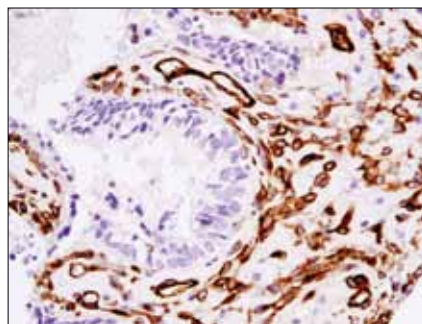
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala177 of human cavin-1 protein.

Background References:

- (1) Bastiani, M. and Parton, R.G. (2010) *J Cell Sci* 123, 3831-6.
- (2) Cohen, A.W. et al. (2004) *Physiol Rev* 84, 1341-79.
- (3) Kovtun, O. et al. (2015) *J Cell Sci* 128, 1269-78.
- (4) Ding, S.Y. et al. (2014) *J Biol Chem* 289, 8473-83.
- (5) Perez-Diaz, S. et al. (2014) *FASEB J* 28, 3769-79.
- (6) Hamoudane, M. et al. (2013) *J Endocrinol Invest* 36, 204-8.
- (7) Nassar, Z.D. et al. (2013) *Nat Rev Urol* 10, 529-36.
- (8) Nassar, Z.D. et al. (2013) *Oncotarget* 4, 1844-55.



Western blot analysis of extracts from various cell lines using Cavin-1 (D1P6W) Rabbit mAb (upper) and β -Actin (D6A8) Rabbit mAb #8457 (lower).



Immunohistochemical analysis of paraffin-embedded human ovarian carcinoma using Cavin-1 (D1P6W) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

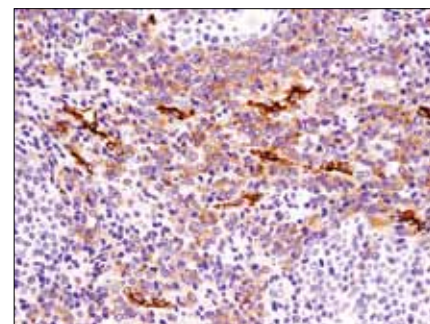
*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:1000†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114
†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Immunofluorescence (IF-IC)	1:400

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Cavin-1 (D1P6W) Rabbit mAb.

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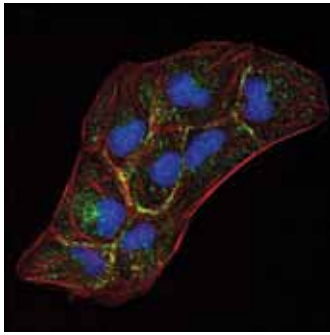
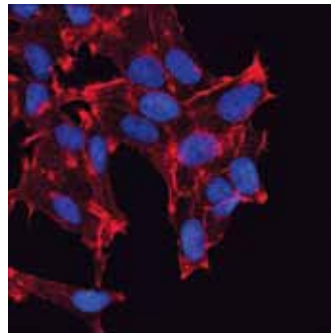
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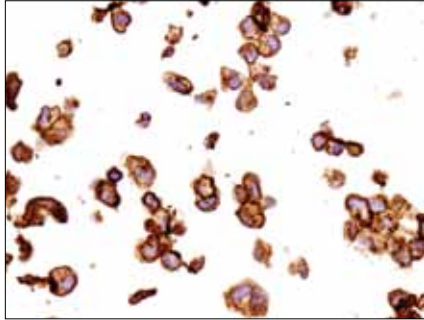
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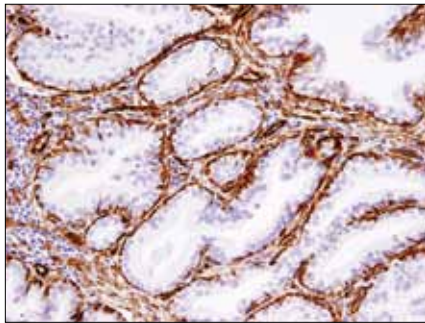
Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

ACHN**LNCaP**

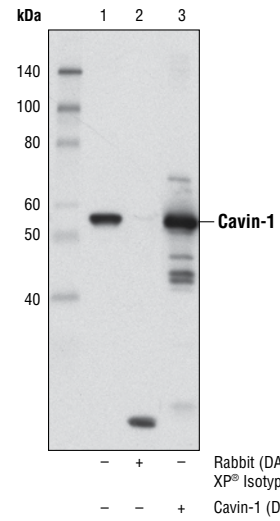
Confocal immunofluorescent analysis of ACHN (left) and LNCaP (right) cells using Cavin-1 (D1P6W) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Immunohistochemical analysis of paraffin-embedded ACHN (left) and LNCaP (right) cell pellets using Cavin-1 (D1P6W) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human prostate carcinoma using Cavin-1 (D1P6W) Rabbit mAb.



Immunoprecipitation of cavin-1 from ACHN cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is Cavin-1 (D1P6W) Rabbit mAb. Western blot analysis was performed using Cavin-1 (D1P6W) Rabbit mAb. A light chain-specific secondary antibody was used.

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