

#3238 Store at -20°C

Caveolin-1 Antibody

100 µl
 (10 western blots)



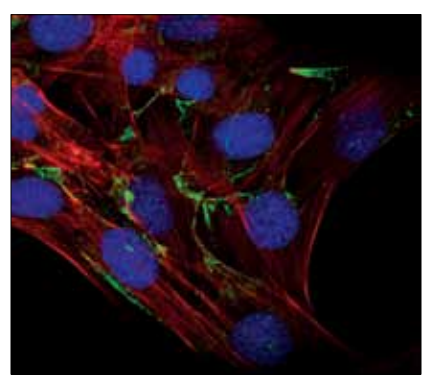
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 orders@cellsignal.com
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rev. 01/04/12

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IHC-P, IHC-F, IF-IC, F Endogenous	H, M, R, B, Hm, Pig, Z	21, 24 kDa	Rabbit**

Background: The 21-24 kDa integral proteins, caveolins, are the principal structural components of the cholesterol/sphingolipid-enriched plasma membrane microdomain caveolae. Three members of the caveolins family (caveolin-1, -2 and -3) have been identified with different tissue distributions. Caveolins form hetero- and homooligomers, which interact with cholesterol and other lipids (1). Caveolins are involved in diverse biological functions, including vesicular trafficking, cholesterol homeostasis, cell adhesion and apoptosis, and are also implicated in neurodegenerative disease (2). Caveolins also interact with multiple signaling molecules, such as G-α subunit, tyrosine kinase receptors, PKCs, Src family tyrosine kinases and eNOS (1,2). It is believed that caveolins serve as scaffolding proteins for the integration of signal transduction. Phosphorylation at Tyr14 is essential for caveolin association with SH2 or PTB domain-containing adaptor proteins, such as GRB7 (3-5). Phosphorylation at Ser80 regulates caveolin binding to the ER membrane and entry into the secretory pathway (6).



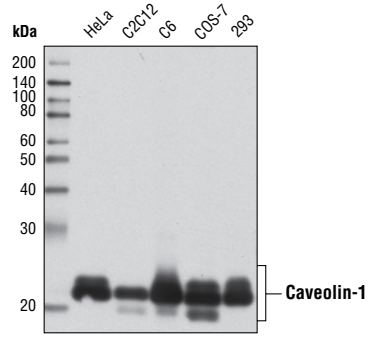
Confocal immunofluorescent analysis of C2-C12 cells using Caveolin-1 Antibody (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Specificity/Sensitivity: Caveolin-1 Antibody detects endogenous levels of caveolin-1 protein. This antibody does not cross-react with caveolin-2 or -3.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu20 of human caveolin-1. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- Okamoto, T. et al. (1998) *J. Biol. Chem.* 273, 5419-5422.
- Smart, E.J. et al. (1999) *Mol. Cell. Biol.* 19, 7289-7304.
- Nomura, R. et al. (1999) *Mol. Biol. Cell* 10, 975-986.
- Volonte, D. et al. (2001) *J. Biol. Chem.* 276, 8094-8103.
- Lee, H. et al. (2000) *Mol. Endocrinol.* 14, 1750-1775.
- Schlegel, A. et al. (2001) *J. Biol. Chem.* 276, 4398-4408.



Western blot analysis of extracts from various cell lines using Caveolin-1 Antibody.

Entrez-Gene ID #857
Swiss-Prot Acc. #Q03135

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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	1:50
Immunohistochemistry (Paraffin)	1:250†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114
Immunohistochemistry (Frozen)	1:1000†
Fixative:	4% formaldehyde
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114
† Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Immunofluorescence (IF-IC)	1:400
Flow Cytometry	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

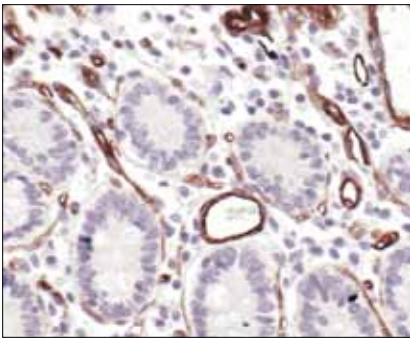
Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

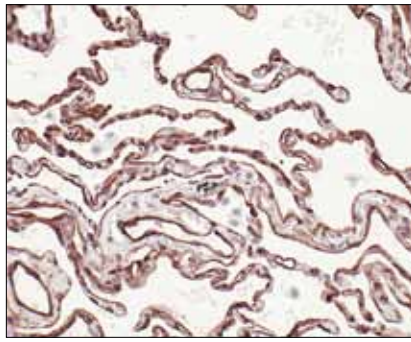
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 DRAQ5® is a registered trademark of Biostatus Limited.

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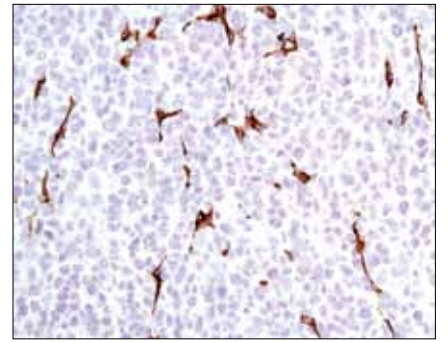
Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 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.



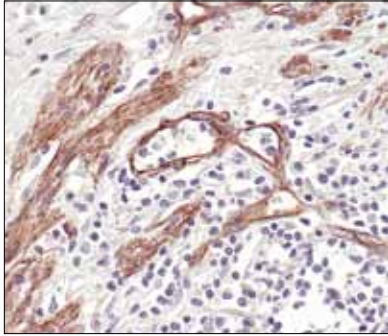
Immunohistochemical analysis of paraffin-embedded human colon using Caveolin-1 Antibody.



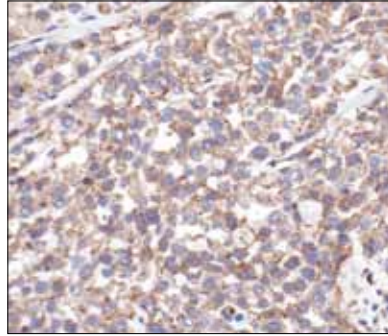
Immunohistochemical analysis of paraffin-embedded human lung using Caveolin-1 Antibody.



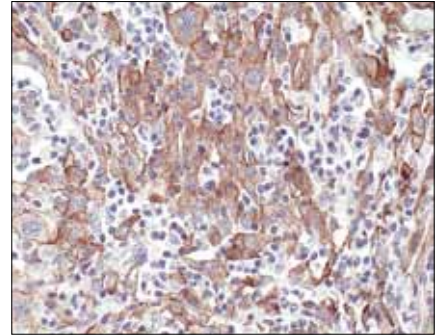
Immunohistochemical analysis of paraffin-embedded 4T1 syngeneic mouse tumor using Caveolin-1 Antibody.



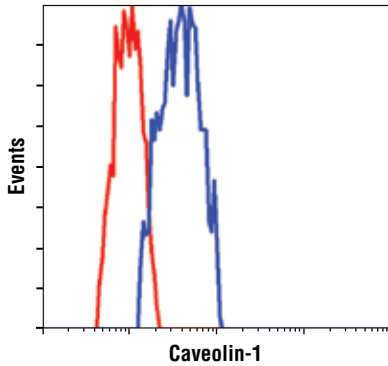
Immunohistochemical analysis of paraffin-embedded Non-Hodgkin's lymphoma using Caveolin-1 Antibody.



Immunohistochemical analysis of frozen H1650 xenograft using Caveolin-1 Antibody.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma using Caveolin-1 Antibody.



Flow cytometric analysis of HeLa cells, using Caveolin-1 antibody (blue) compared to a nonspecific negative control antibody (red).