

#69036 Store at -20°C

Cavin-1 (D1P6W) Rabbit mAb


Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P, IF-IC	H	Endogenous	50	Rabbit IgG	#Q6NZI2	284119

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:200
1:1000
1:400

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.

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

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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)
IF-IC: Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.
SignalStain is a registered trademark of Cell Signaling Technology, Inc.
XP is a registered trademark of Cell Signaling Technology, Inc.
All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.