

Caveolin-1 (D46G3) XP® Rabbit mAb (HRP Conjugate)

✓ 100 µl (10 western blots)

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rev. 04/23/14

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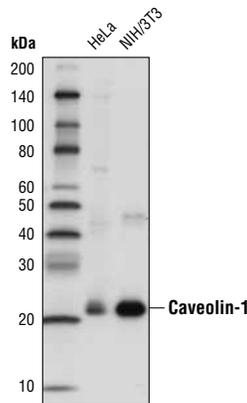
| Applications W Endogenous | Species Cross-Reactivity* H, M, R, Hm, Mk, B, Dg | Molecular Wt. 21, 24 kDa | Isotype Rabbit IgG |
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Description: This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Caveolin-1 (D46G3) XP® Rabbit mAb #3267.

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 caveolin family (caveolin-1, -2, and -3) have been identified with different tissue distributions. Caveolins form hetero- and homo-oligomers that 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 interact with multiple signaling molecules such as Gα 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).

Specificity/Sensitivity: Caveolin-1 (D46G3) XP® Rabbit mAb (HRP Conjugate) detects endogenous levels of total caveolin-1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu20 of human caveolin-1 protein.



Western blot analysis of extracts from HeLa and NIH/3T3 cells using Caveolin-1 (D46G3) XP® Rabbit mAb (HRP Conjugate).

Entrez-Gene ID #857
UniProt Acc. #Q03135

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 other than human is determined by western blot using the unconjugated antibody.**

HRP-conjugated antibodies do not require incubation with a secondary antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For product 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.

Background References:

- (1) Okamoto, T. et al. (1998) *J Biol Chem* 273, 5419-22.
- (2) Smart, E.J. et al. (1999) *Mol Cell Biol* 19, 7289-304.
- (3) Nomura, R. et al. (1999) *Mol. Biol. Cell* 10, 975-986.
- (4) Volonte, D. et al. (2001) *J. Biol. Chem.* 276, 8094-8103.
- (5) Lee, H. et al. (2000) *Mol Endocrinol* 14, 1750-75.
- (6) Schlegel, A. et al. (2001) *J Biol Chem* 276, 4398-408.

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

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.