Revision 1

Store at -20C

#12506

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

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

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Hm Mk B Dg	Endogenous	21, 24	Rabbit IgG	#Q03135	857

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

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.

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).

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.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey **B:** Bovine **Dg:** Dog

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