

Store at
-20°C
#12368

ROS1 (D4D6[®]) Rabbit mAb (Biotinylated)

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100 µl (10 western blots)

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Entrez-Gene ID #6098
UniProt ID #P08922

rev. 09/18/14

For Research Use Only. Not For Use In Diagnostic Procedures.

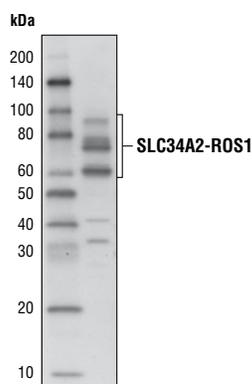
Applications W Endogenous	Species Cross-Reactivity* H	Molecular Wt. 258, 110, 50-80 kDa	Isotype Rabbit IgG
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Description: This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated ROS1 (D4D6[®]) Rabbit mAb #3287.

Background: ROS1, an orphan receptor tyrosine kinase of the insulin receptor family, was initially identified as a homolog of v-ros from the UR2 sarcoma virus (1). ROS1 consists of a large extracellular domain that is composed of six fibronectin repeats, a transmembrane domain, and an intracellular kinase domain. While the function of ROS1 is undefined, it has been shown to play an important role in differentiation of epididymal epithelium (2). The first oncogenic fusion of ROS1, FIG-ROS1, was initially identified by research studies in glioblastoma (3), and subsequent studies have found this fusion in cholangiocarcinoma (4), ovarian cancer (5) and non-small cell lung cancer (NSCLC) (6). Investigators have found additional oncogenic ROS1 fusion proteins in NSCLC (at a frequency of ~1.6%), where the ROS1 kinase domain is fused to the amino-terminal region of a number of different proteins, including CD74 and SLC34A2 (6-8). ROS1 fusion proteins activate the SHP-2 phosphatase, PI3K/Akt/mTOR, Erk, and Stat3 pathways (3,4,9).

Specificity/Sensitivity: ROS1 (D4D6[®]) Rabbit mAb (Biotinylated) recognizes endogenous levels of total ROS1 protein. This antibody does not cross-react with other related proteins when analyzed by western blot.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a protein corresponding to residues in the carboxy terminal domain of the human ROS1 protein.



Western blot analysis of extracts from HCC78 cells using ROS1 (D4D6[®]) Rabbit mAb (Biotinylated). Streptavidin-HRP #3999 was used for western detection.

Storage: Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.

***Biotinylated antibodies are designed to be detected using streptavidin or anti-biotin antibody conjugates.**

Recommended Antibody Dilutions:

Western blotting 1:1000

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

Background References:

- (1) Matsushime, H. et al. (1986) *Mol Cell Biol* 6, 3000-4.
- (2) Yeung, C.H. et al. (1999) *Biol Reprod* 61, 1062-9.
- (3) Charest, A. et al. (2003) *Genes Chromosomes Cancer* 37, 58-71.
- (4) Gu, T.L. et al. (2011) *PLoS One* 6, e15640.
- (5) Birch, A.H. et al. (2011) *PLoS One* 6, e28250.
- (6) Rimkunas, V.M. et al. (2012) *Clin Cancer Res* 18, 4449-57.
- (7) Rikova, K. et al. (2007) *Cell* 131, 1190-203.
- (8) Stumpfova, M. and Jänne, P.A. (2012) *Clin Cancer Res* 18, 4222-4.
- (9) Jun, H.J. et al. (2012) *Cancer Res* 72, 3764-74.

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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.

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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.