#12035 Store at -20°C

ALDH1A1 (D4R9V) Rabbit mAb

☑ 100 µl
(10 western blots)

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Entrez-Gene ID #216
Swiss-Prot Acc. #P00352

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M	55 kDa	Rabbit IgG**

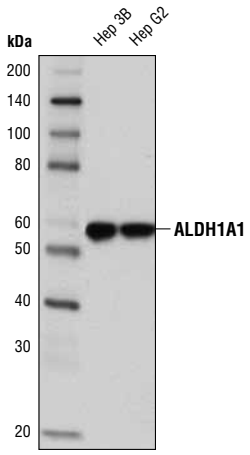
Background: The aldehyde dehydrogenase family is a large group of enzymes that oxidize aldehydes formed through metabolic processes to their carboxylic acids (1). ALDH1A1 is a liver cytosolic isoform of acetaldehyde dehydrogenase and is involved in the major pathway of alcohol metabolism along with alcohol dehydrogenase (2). ALDH1A1 is also known as retinal dehydrogenase 1 and is involved in retinol metabolism, converting retinol to retinoic acid (3). Recent studies suggest that control of retinoid signaling through ALDH1A1 may influence hematopoietic stem cell differentiation (4). There has been recent interest in ALDH1 isoforms as predictive biomarkers in disease. Several studies have suggested that ALDH1A1 is a potential marker for cancer stem cells and chemoresistance in several tumor types, such as melanoma (5), lung cancer (6), glioblastoma (7).

Specificity/Sensitivity: ALDH1A1 (D4R9V) Rabbit mAb recognizes endogenous levels of total ALDH1A1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of mouse ALDH1A1 protein.

Background References:

(1) Jackson, B. et al. (2011) *Hum Genomics* 5, 283-303.
(2) Edenberg, H.J. (2007) *Alcohol Res Health* 30, 5-13.
(3) Duester, G. (2000) *Eur J Biochem* 267, 4315-24.
(4) Chute, J.P. et al. (2006) *Proc Natl Acad Sci USA* 103, 11707-12.
(5) Luo, Y. et al. (2012) *Stem Cells* 30, 2100-13.
(6) Huang, C.P. et al. (2013) *Cancer Lett* 328, 144-51.
(7) Schäfer, A. et al. (2012) *Neuro Oncol* 14, 1452-64.



Western blot analysis of extracts from Hep 3B and Hep G2 cells using ALDH1A1 (D4R9V) Rabbit mAb.

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 is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100

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 complementary products.

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.