

Store at
-20°C

#36671

ALDH1A1 (D9J7R) XP[®] Rabbit mAbSupport: +1-978-867-2388 (U.S.)
www.cellsignal.com/supportOrders: 877-616-2355 (U.S.)
orders@cellsignal.comEntrez-Gene ID #216
UniProt ID #P00352

rev. 03/27/18

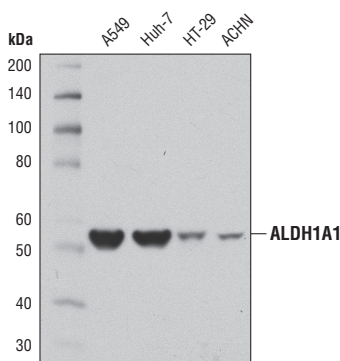
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Applications
W, IP, IF-IC, F
EndogenousSpecies Cross-Reactivity*
HMolecular Wt.
55 kDaIsotype
Rabbit IgG**

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), and glioblastoma (7).

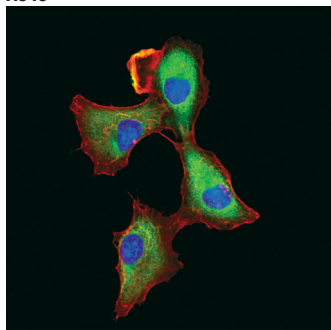
Specificity/Sensitivity: ALDH1A1 (D9J7R) XP[®] Rabbit mAb recognizes endogenous levels of total ALDH1A1 protein.

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

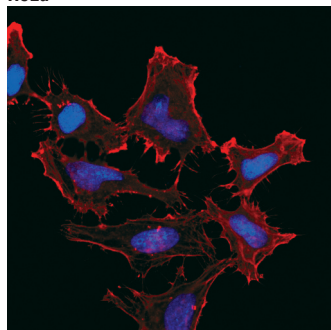


Western blot analysis of extracts from various cell lines using ALDH1A1 (D9J7R) XP[®] Rabbit mAb.

A549



HeLa



Confocal immunofluorescent analysis of A549 (positive, left) and HeLa (negative, right) cells using ALDH1A1 (D9J7R) XP[®] Rabbit mAb (green) and β -Actin (8H10D10) Mouse mAb #3700 (red). Blue pseudocolor = DRAQ5[®] #4084 (fluorescent DNA dye).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/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
Immunofluorescence (IF-IC)	1:400
IF Protocol:	Methanol Fixation required
Flow Cytometry	1:200

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) 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.

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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.

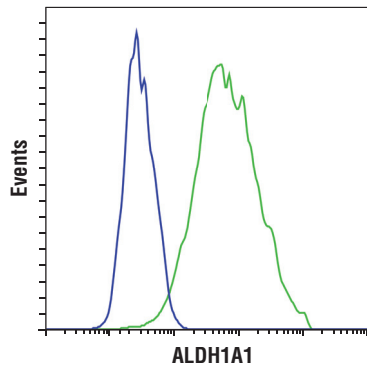
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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken 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.



Flow cytometric analysis of HeLa (blue) and ACHN (green) cells using ALDH1A1 (D9J7R) XP[®] Rabbit mAb. Anti-rabbit IgG (H+L), F(ab')₂ Fragment (Alexa Fluor[®] 488 Conjugate) #4412 was used as a secondary antibody.

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