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#55481

ALDH1A2 (E6O6Q) Rabbit mAb

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New 06/19

Entrez-Gene ID #8854
UniProt ID #O94788

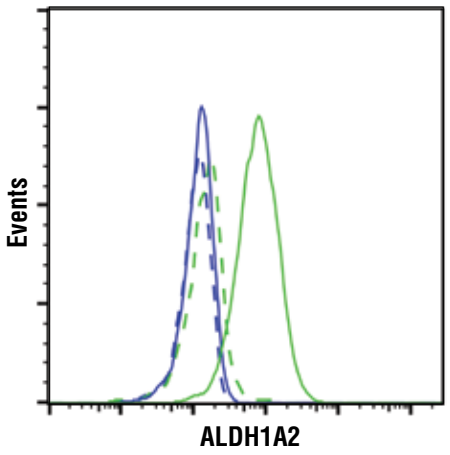
For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IF-IC, F Endogenous	H	60 kDa	Rabbit IgG**

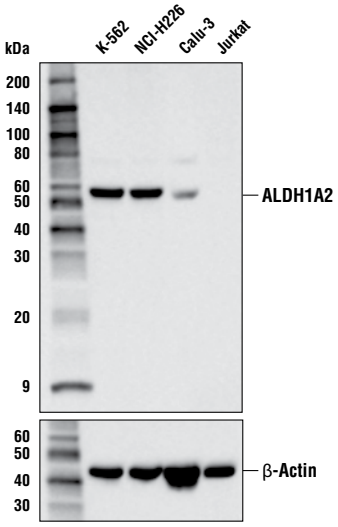
Background: The aldehyde dehydrogenase family is a large group of enzymes that catalyze the oxidization of aldehydes into carboxylic acids (1). Aldehyde Dehydrogenase 1A2 (ALDH1A2, RALHD2) is among a group of aldehyde dehydrogenases that catalyze the metabolism of retinaldehyde into retinoic acid (RA), which plays a critically important signaling role in animal development (2). Research studies have shown that ALDH1A2 also plays a role postnatally in modulating the effects of RA signaling on immune cell function (3-5). In one example using a genetic mouse model, it was shown that ALDH1A2-dependent RA signaling was a downstream mediator of NOTCH-dependent T cell differentiation (6).

Specificity/Sensitivity: ALDH1A2 (E6O6Q) Rabbit mAb recognizes endogenous levels of total ALDH1A2 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro9 of human ALDH1A2 protein.



Flow cytometric analysis of Jurkat cells (blue) and K-562 cells (green), using ALDH1A2 (E6O6Q) Rabbit mAb (solid lines) or a concentration-matched Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (dashed lines). Anti-rabbit IgG (H+L), F(ab')$_2$ Fragment (Alexa Fluor® 488 Conjugate) #4412 was used as a secondary antibody.



Western blot analysis of extracts from various cell lines using ALDH1A2 (E6O6Q) Rabbit mAb (upper) and β-Actin (D6A8) Rabbit mAb #8457 (lower). Expression levels of ALDH1A2 among cell lines are consistent with expectations based on publicly available bioinformatic databases.

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
Immunofluorescence (IF-IC)	1:200-1:800
Fixative:	4% Formaldehyde
Permeabilization:	0.3% Triton X-100
Flow Cytometry	1:400-1:1600

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) Means, A.L. and Gudas, L.J. (1995) *Annu Rev Biochem* 64, 201-33.
(3) Dalmas, E. et al. (2017) *Immunity* 47, 928-942.e7.
(4) Shiokawa, A. et al. (2017) *Immunology* 152, 52-64.
(5) Yokota-Nakatsuma, A. et al. (2016) *Sci Rep* 6, 37914.
(6) Zaman, T.S. et al. (2017) *J Immunol* 199, 1989-97.

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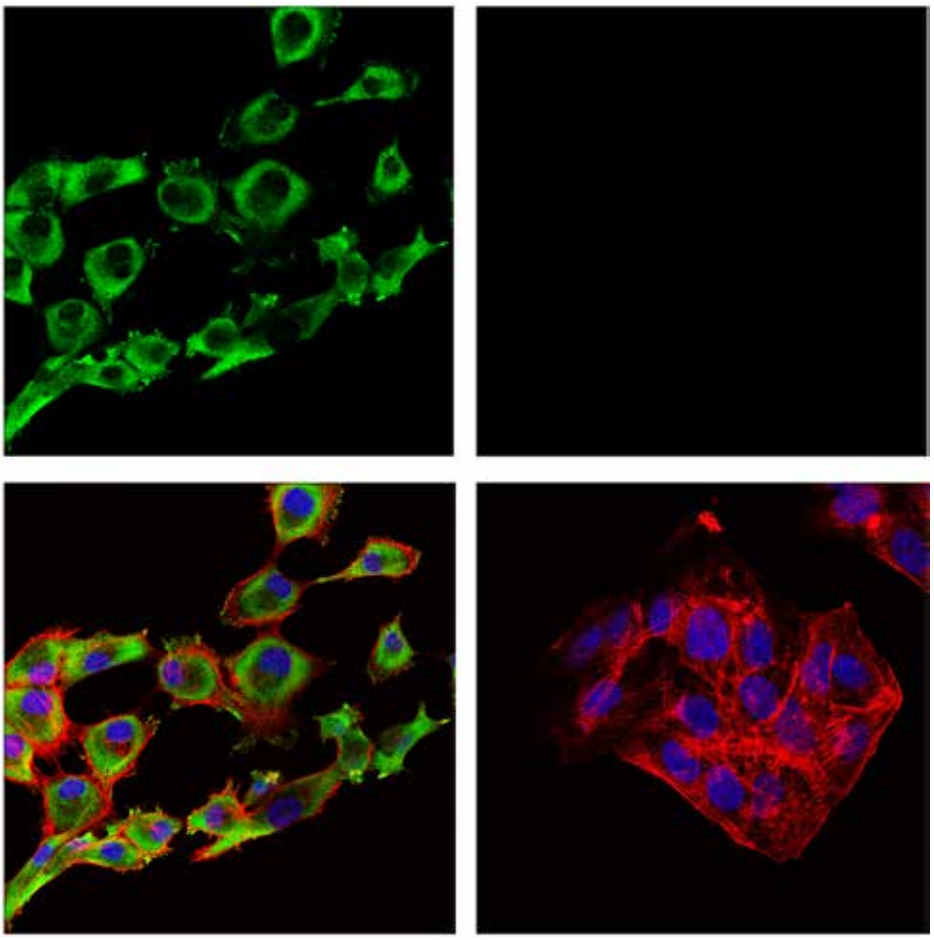
Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken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



Confocal immunofluorescent analysis of NCI-H226 cells (left, positive) or Hep G2 (right, negative), using ALDH1A2 (E6O6Q) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Samples were mounted in ProLong® Gold Antifade Reagent with DAPI #8961 (blue).