

Product Name: KD-Validated ALDH1A1 Mouse Monoclonal Antibody**Catalog #: KVA01453**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Mouse
Application	WB,FCM,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG1
Clonality	Mouse mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:400-1:2,000; FC 1:200-1:2,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 54.9kDa

Antigen Information

Gene Name	ALDH1A1 ALDH1A1; Aldehyde Dehydrogenase 1 Family Member A1; RALDH1; ALDH1; PUMB1; 3-Deoxyglucosone Dehydrogenase; Retinaldehyde Dehydrogenase 1; Aldehyde Dehydrogenase 1A1; Retinal Dehydrogenase 1; EC 1.2.1.36; ALDH-E1; RALDH 1; ALHDII; ALDC; Epididymis Secretory Sperm Binding Protein Li 53e; Aldehyde Dehydrogenase 1 Family, Member A1; Aldehyde Dehydrogenase Family 1 Member A1; Aldehyde Dehydrogenase, Liver Cytosolic; Aldehyde Dehydrogenase 1, Soluble; Aldehyde Dehydrogenase, Cytosolic; Epididymis Luminal Protein 12; Acetaldehyde Dehydrogenase 1; Epididymis Luminal Protein 9; ALDH Class 1; EC 1.2.1.19; EC 1.2.1.28; EC 1.2.1.3; HEL-S-53e; EC 1.2.1; ALDH11; RalDH1; HEL-9; HEL12
Alternative Names	

Gene ID	216.0
SwissProt ID	P00352
Immunogen	Recombinant protein of human ALDH1A1

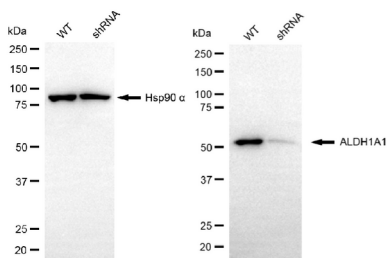
Background

The protein encoded by this gene belongs to the aldehyde dehydrogenase family. Aldehyde dehydrogenase is the next enzyme after alcohol dehydrogenase in the major pathway of alcohol metabolism. There are two major aldehyde dehydrogenase isozymes in the liver, cytosolic and mitochondrial, which are encoded by distinct genes, and can be distinguished by their electrophoretic mobility, kinetic properties, and subcellular localization. This gene encodes the cytosolic isozyme. Studies in mice show that through its role in retinol metabolism, this gene may also be involved in the regulation of the metabolic responses to high-fat diet. [provided by RefSeq, Mar 2011]

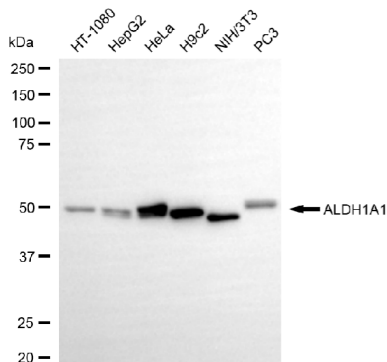
Research Area

Neuroscience, Stem Cells, Cancer

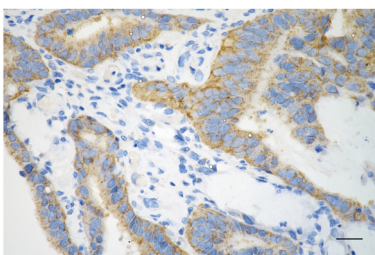
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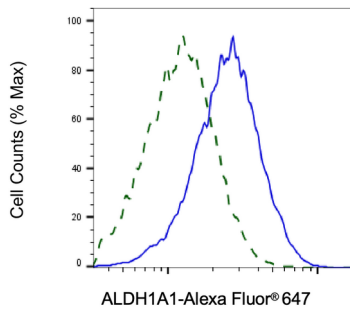
Western blotting analysis using ALDH1A1 antibody (KVA01453). ALDH1A1 expression in wild-type (WT) and ALDH1A1 shRNA knockdown (KD) HSHC cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with ALDH1A1 antibody (KVA01453, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody (APS0631, 1:10,000) respectively.



Western blotting analysis using ALDH1A1 antibody (KVA01453). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with ALDH1A1 antibody (KVA01453, 1:2,000) and HRP-conjugated goat anti-mouse secondary antibody (APS0631, 1:10,000) respectively.



Immunohistochemistry was performed on paraffin-embedded human sigmoid colon carcinoma using ALDH1A1 antibody (KVA01453, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Validation of ALDH1A1 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with ALDH1A1 antibody (KVA01453, 1:2,000) and analyzed using BD flow cytometer.