

ALDH6A1 Antibody

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AW5291

Product Information

Application	IF, IHC-P, WB
Primary Accession	Q02252
Reactivity	Human
Predicted	Mouse
Host	Mouse
Clonality	Monoclonal
Calculated MW	57840
Isotype	IgG1, κ
Antigen Source	HUMAN

Additional Information

Gene ID	4329
Antigen Region	104-523
Other Names	ALDH6A1; MMSDH; Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial; Aldehyde dehydrogenase family 6 member A1
Dilution	IF~~1:25 IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This ALDH6A1 antibody is generated from mouse immunized with ALDH6A1 recombinant protein.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ALDH6A1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALDH6A1 (HGNC:7179)
Function	Malonate and methylmalonate semialdehyde dehydrogenase involved in the catabolism of valine, thymine, and compounds catabolized by way of beta-alanine, including uracil and cytidine.

Background

This protein belongs to the aldehyde dehydrogenases family of proteins. This enzyme plays a role in the valine and pyrimidine catabolic pathways. The product of this gene, a mitochondrial methylmalonate semialdehyde dehydrogenase, catalyzes the irreversible oxidative decarboxylation of malonate and methylmalonate semialdehydes to acetyl- and propionyl-CoA. Methylmalonate semialdehyde dehydrogenase deficiency is characterized by elevated beta-alanine, 3-hydroxypropionic acid, and both isomers of 3-amino and 3-hydroxyisobutyric acids in urine organic acids.

References

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. *Mol Med*, 2010 Jul-Aug. PMID 20379614.

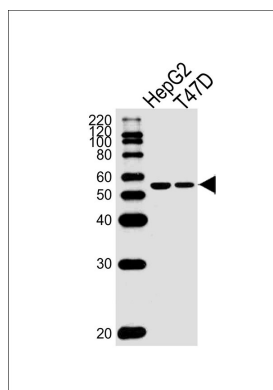
Association study between single-nucleotide polymorphisms in 199 drug-related genes and commonly measured quantitative traits of 752 healthy Japanese subjects. Saito A, et al. *J Hum Genet*, 2009 Jun. PMID 19343046.

Physical mapping of CHX10, ALDH6A1, and ABCD4 on bovine chromosome 10q34. Kuiper H, et al. *Cytogenet Genome Res*, 2005. PMID 15909363.

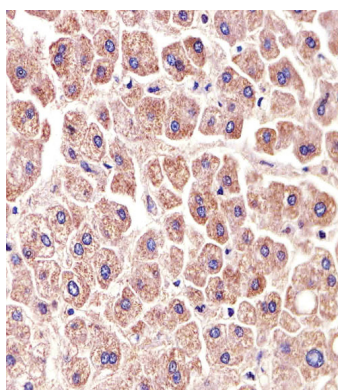
The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Gerhard DS, et al. *Genome Res*, 2004 Oct. PMID 15489334.

The human plasma proteome: a nonredundant list developed by combination of four separate sources. Anderson NL, et al. *Mol Cell Proteomics*, 2004 Apr. PMID 14718574.

Images

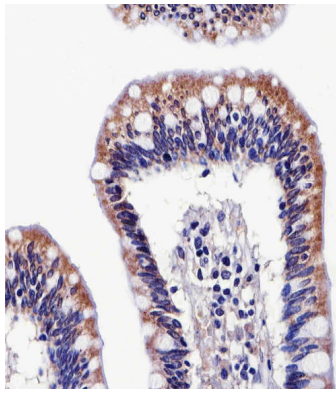


Western blot analysis of lysates from HepG2, T47D cell line (from left to right), using ALDH6A1 Antibody (Cat. #AW5291). AW5291 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody.

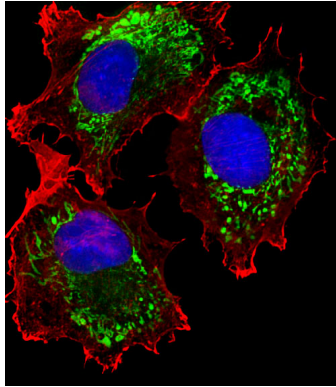


Immunohistochemical analysis of paraffin-embedded H. liver section using ALDH6A1 Antibody (Cat#AW5291). AW5291 was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

Immunohistochemical analysis of paraffin-embedded H. colon section using ALDH6A1 Antibody (Cat#AW5291). AW5291 was diluted at 1:25 dilution. A



peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Fluorescent image of MCF-7 cells stained with ALDH6A1 Antibody (Cat#AW5291). AW5291 was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody (green). DAPI was used to stain the cell nuclear (blue). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.