10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ALDH6A1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1838b

Product Information

Application	IHC-P, IF, WB, E
Primary Accession	Q02252
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,IgK
Clone Names	147CT8.3.4
Calculated MW	57840

Additional Information

Gene ID	4329
Other Names	Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial, MMSDH, Malonate-semialdehyde dehydrogenase [acylating], Aldehyde dehydrogenase family 6 member A1, ALDH6A1, MMSDH
Target/Specificity	This ALDH6A1 antibody is generated from mouse immunized with ALDH6A1 recombinant protein.
Dilution	IHC-P~~1:100~500 IF~~1:25 WB~~1:1000 E~~Use at an assay dependent concentration.
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.

Cellular Location Mitochondrion.

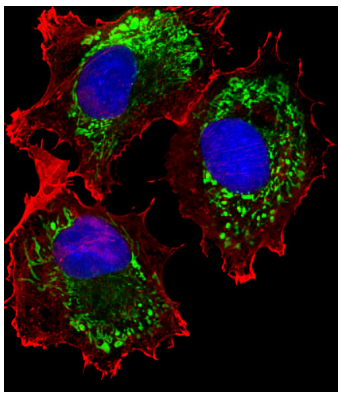
Background

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.

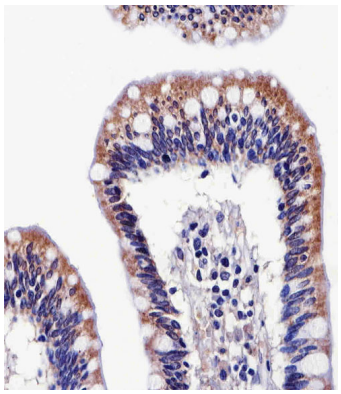
References

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

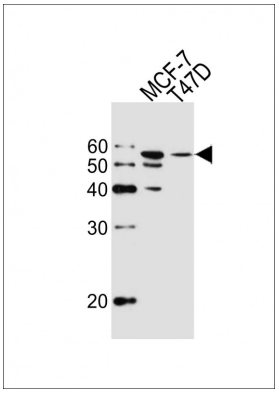


Fluorescent image of MCF-7 cells stained with ALDH6A1 Antibody (Cat#AM1838b). AM1838b was diluted at 1:25 dilution. An Alexa Fluor® 488-conjugated goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody (green). DAPI was used to stain the cell nuclear (blue). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).

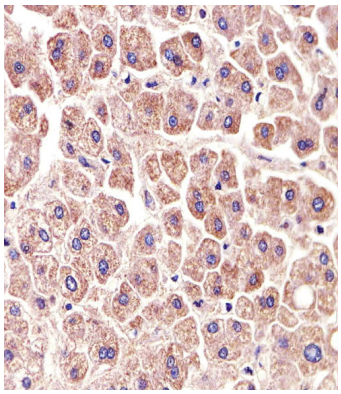


Immunohistochemical analysis of paraffin-embedded H.colon section using ALDH6A1 Antibody(Cat#AM1838b). AM1838b was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

Western blot analysis of lysates from MCF-7, T47D cell line (from left to right), using ALDH6A1 Antibody(Cat. #AM1838b). AM1838b 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. Lysates at 20µg per lane.



Immunohistochemical analysis of paraffin-embedded H.liver section using ALDH6A1 Antibody(Cat#AM1838b). AM1838b 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.