

Rabbit ALDH6A1 Polyclonal Antibody | anti-ALDH6A1 antibody

Anti-ALDH6A1 Antibody

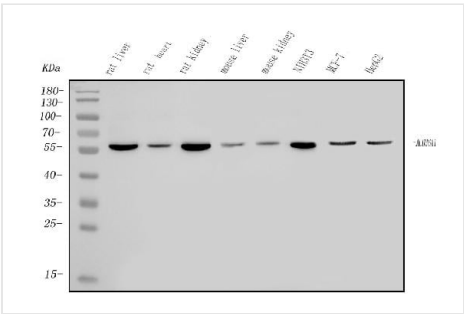
CATALOG # AAA125803	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

ALDH6A1; Polyclonal Antibody; Anti-ALDH6A1 Antibody; Methylmalonate-semialdehyde dehydrogenase [acylating]; mitochondrial; MMSDH; Malonate-semialdehyde dehydrogenase [acylating]; Aldehyde dehydrogenase family 6 member A1; aldehyde dehydrogenase 6 family member A1; anti-ALDH6A1 antibody

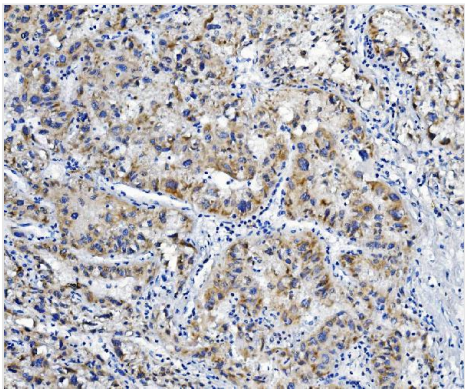
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for ALDH6A1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-ALDH6A1 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthetic peptide corresponding to a sequence of human ALDH6A1 (DTNFGKQGIQFYTLK).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



WB (Western Blot)

Figure 1. Western blot analysis of ALDH6A1 using anti-ALDH6A1 antibody (AAA125803).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: rat liver tissue lysatesLane 2: rat heart tissue lysatesLane 3: rat kidney tissue lysatesLane 4: mouse liver tissue lysatesLane 5: mouse kidney tissue lysatesLane 6: mouse NIH/3T3 whole cell lysatesLane 7: human MCF-7 whole cell lysatesLane 8: human HEPG2 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-ALDH6A1 antigen affinity purified polyclonal antibody (Catalog # AAA125803) at 0. 25 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for ALDH6A1 at approximately 58KD. The expected band size for ALDH6A1 is at 58KD.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of ALDH6A1 using anti-ALDH6A1 antibody (AAA125803).ALDH6A1 was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-ALDH6A1 Antibody (AAA125803) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

ADDITIONAL INFORMATION

Related Product Information for anti-ALDH6A1 antibody	Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial (MMSDH) is an enzyme that in humans is encoded by the ALDH6A1 gene. This gene encodes a member of the aldehyde dehydrogenase protein family. The encoded protein is a mitochondrial methylmalonate semialdehyde dehydrogenase that plays a role in the valine and pyrimidine catabolic pathways. This protein 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. Alternate splicing results in multiple transcript variants.
References	1. Chambliss, K. L., Gray, R. G. F., Rylance, G., Pollitt, R. J., Gibson, K. M. Molecular characterization of methylmalonate semialdehyde dehydrogenase deficiency. J. Inherit. Metab. Dis. 23: 497-504, 2000. 2. Dobrowolski, S. F., Alodaib, A., Karunanidhi, A., Basu, S., Holecko, M., Lichter-Konecki, U., Pappan, K. L., Vockley, J. Clinical, biochemical, mitochondrial, and metabolomic aspects of methylmalonate semialdehyde dehydrogenase deficiency: report of a fifth case. Molec. Genet. Metab. 129: 272-277, 2020. 3. Gray, R. G. F., Pollitt, R. J., Webley, J. Methylmalonic semialdehyde dehydrogenase deficiency: demonstration of defective valine and beta-alanine metabolism and reduced malonic semialdehyde dehydrogenase activity in cultured fibroblasts. Biochem. Med. Metab. Biol. 38: 121-124, 1987.

NCBI AND UNIPROT INFORMATION

NCBI GI #	12643424
NCBI GeneID	4329
UniProt Accession #	Q02252; Q9UKM8; B2R609; B4DFS8; J3KNU8
Molecular Weight	535
NCBI Official Full Name	Methylmalonate-semialdehyde dehydrogenase
NCBI Official Synonym Full Names	aldehyde dehydrogenase 6 family, member A1
NCBI Official Symbol	ALDH6A1
NCBI Official Synonym Symbols	MMSDH; MMSADHA

NCBI Protein Information	methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial; methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial; mitochondrial acylating methylmalonate-semialdehyde dehydrogenase
UniProt Protein Name	Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial
UniProt Gene Name	ALDH6A1
UniProt Synonym Gene Names	MMSDH; MMSDH; Malonate-semialdehyde dehydrogenase [acylating]
UniProt Entry Name	MMSA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/aldh6a1-antibody-immunohistochemistry-western-blot-elisa/125803>