

# Human ALDH5A1 antibody

Catalog Number: ATGA0398

## PRODUCT INFORMATION

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**Catalog number**

ATGA0398

**Clone No.**

AT17F5

**Product type**

Monoclonal Antibody

**UnitProt No.**

P51649

**NCBI Accession No.**

NP\_001071

**Alternative Names**

Succinate-semialdehyde dehydrogenase mitochondrial, SSADH, SSDH, Succinate-semialdehyde dehydrogenase, mitochondrial

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human ALDH5A1 (48-535aa) purified from E. coli

**Isotype**

IgG2a kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB, ICC/IF

**Usage**

The antibody has been tested by ELISA, Western blot and ICC/IF analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

This protein belongs to the aldehyde dehydrogenase family of proteins. This gene encodes a mitochondrial NAD<sup>+</sup>-dependent succinic semialdehyde dehydrogenase. A deficiency of this enzyme, known as 4-hydroxybutyricaciduria, is a rare inborn error in the metabolism of the neurotransmitter gamma-aminobutyric acid (GABA). In response to the defect, physiologic fluids from patients accumulate GHB, a compound with numerous neuromodulatory properties. Two transcript variants encoding distinct isoforms have been identified for this gene.

### General References

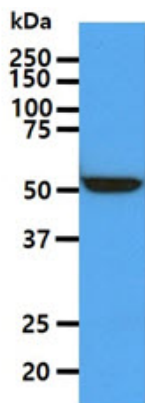
Chambliss KL., et al. (1995) *The Journal of Biological Chemistry*. 270(1): 461-7.

Trettel F., et al. (1997) *Advances in Experimental Medicine and Biology*. 414: 253-60.

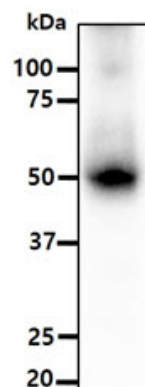
Kim YG., et al. (2009) *EMBO J*. 28(7): 959-68.

## DATA

### Western blot analysis (WB)



The cell lysate of HepG2 (40ug) was resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human ALDH5A1 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

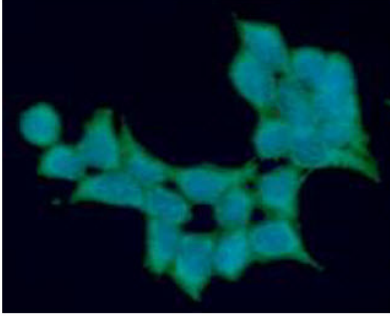


The tissue lysate of mouse liver (40ug) was resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human ALDH5A1 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

### Immunocytochemistry/Immunofluorescence (ICC/IF)

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ICC/IF analysis of ALDH5A1 in 293T cells. The cell was stained with ATGA0398 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).