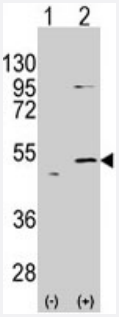
ALDH5A1 polyclonal antibody

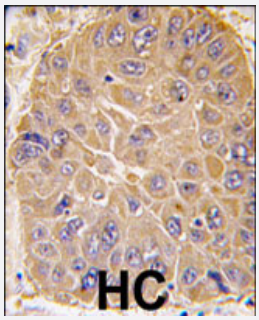
Catalog # PAB3134 Size 400 uL

Applications



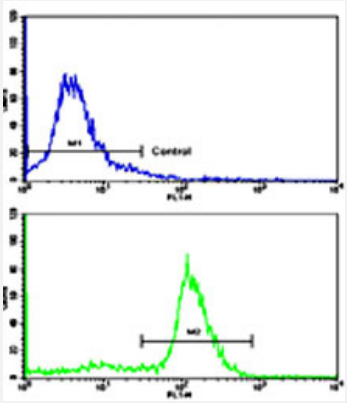
Western Blot (Transfected lysate)

Western blot analysis of ALDH5A1 (arrow) using rabbit ALDH5A1 polyclonal antibody (Cat # PAB3134). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the ALDH5A1 gene (Lane 2) (Origene Technologies).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Formalin-fixed and paraffin-embedded human hepatocellular carcinoma reacted with ALDH5A1 polyclonal antibody (Cat # PAB3134) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow Cytometry

Flow cytometric analysis of ATDC5 cells using ALDH5A1 polyclonal antibody (Cat # PAB3134)(bottom histogram) compared to a negative control cell (top histogram).
FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of ALDH5A1.

Immunogen	A synthetic peptide (conjugated with KLH) corresponding to N-terminus of human ALDH5A1.
Host	Rabbit
Reactivity	Human
Form	Liquid
Purification	Protein A purification
Recommend Usage	Western Blot (1:1000) Immunohistochemistry (1:10-50) Flow cytometry (1:10-50) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS (0.09% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

- Western Blot (Transfected lysate)

  Western blot analysis of ALDH5A1 (arrow) using rabbit ALDH5A1 polyclonal antibody (Cat # PAB3134). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the ALDH5A1 gene (Lane 2) (Origene Technologies).

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

  Formalin-fixed and paraffin-embedded human hepatocellular carcinoma reacted with ALDH5A1 polyclonal antibody (Cat # PAB3134) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

- Flow Cytometry

  Flow cytometric analysis of ATDC5 cells using ALDH5A1 polyclonal antibody (Cat # PAB3134)(bottom histogram) compared to a negative control cell (top histogram).
  FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Gene Info — ALDH5A1

Entrez GeneID	7915
Protein Accession#	NP_001071;P51649

Gene Name	ALDH5A1
Gene Alias	SSADH, SSDH
Gene Description	aldehyde dehydrogenase 5 family, member A1
Omim ID	271980 610045
Gene Ontology	Hyperlink
Gene Summary	This protein belongs to the aldehyde dehydrogenase family of proteins. This gene encodes a mitochondrial NAD(+)-dependent succinic semialdehyde dehydrogenase. A deficiency of this enzyme, known as 4-hydroxybutyricaciduria, is a rare inborn error in the metabolism of the neurotransmitter 4-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. [provided by RefSeq
Other Designations	NAD(+)-dependent succinic semialdehyde dehydrogenase|OTTHUMP00000016088|aldehyde dehydrogenase 5A1|mitochondrial succinate semialdehyde dehydrogenase|succinate-semialdehyde dehydrogenase

Publication Reference

- Therapeutic concepts in succinate semialdehyde dehydrogenase (SSADH; ALDH5a1) deficiency (gamma-hydroxybutyric aciduria). Hypotheses evolved from 25 years of patient evaluation, studies in Aldh5a1-/- mice and characterization of gamma-hydroxybutyric acid pharmacology.

  Knerr I, Pearl PL, Bottiglieri T, Snead OC, Jakobs C, Gibson KM.

  Journal of Inherited Metabolic Disease 2007 Jun; 30(3):279.

- SSADH variation in primates: intra- and interspecific data on a gene with a potential role in human cognitive functions.

  Blasi P, Palmerio F, Aiello A, Rocchi M, Malaspina P, Novelletto A.

  Journal of Molecular Evolution 2006 Jul; 63(1):54.

- A functional polymorphism in the succinate-semialdehyde dehydrogenase (aldehyde dehydrogenase 5 family, member A1) gene is associated with cognitive ability.

  Plomin R, Turic DM, Hill L, Turic DE, Stephens M, Williams J, Owen MJ, O'Donovan MC.

  Molecular Psychiatry 2004 Jun; 9(6):582.

Pathway

- Alanine

- Butanoate metabolism
- Metabolic pathways

Disease

- Cognition
- Cognition Disorders
- Epilepsy
- Genetic Predisposition to Disease
- Mental Disorders
- Schizophrenia
- Seizures
- Syndrome
- Tobacco Use Disorder
- Wechsler Scales