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ALDH5A1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1472a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P51649
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB11951
Calculated MW	57215
Antigen Region	128-157

Additional Information

Gene ID	7915
Other Names	Succinate-semialdehyde dehydrogenase, mitochondrial, Aldehyde dehydrogenase family 5 member A1, NAD(+)-dependent succinic semialdehyde dehydrogenase, ALDH5A1, SSADH
Target/Specificity	This ALDH5A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 128-157 amino acids from the N-terminal region of human ALDH5A1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	ALDH5A1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALDH5A1 (HGNC:408)
Synonyms	SSADH

Function	Catalyzes one step in the degradation of the inhibitory neurotransmitter gamma-aminobutyric acid (GABA).
Cellular Location	Mitochondrion.
Tissue Location	Brain, pancreas, heart, liver, skeletal muscle and kidney. Lower in placenta

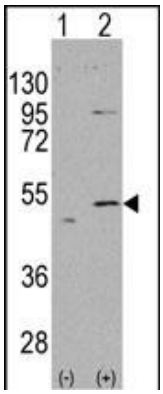
Background

ALDH5A1 belongs to the aldehyde dehydrogenase family of proteins. This protein functions as 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.

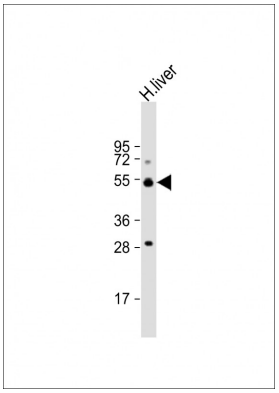
References

Knerr,I., J. Inherit. Metab. Dis. 30 (3), 279-294 (2007) Blasi,P., J. Mol. Evol. 63 (1), 54-68 (2006) Plomin,R., Mol. Psychiatry 9 (6), 582-586 (2004)

Images

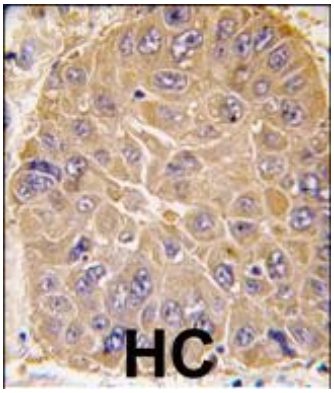


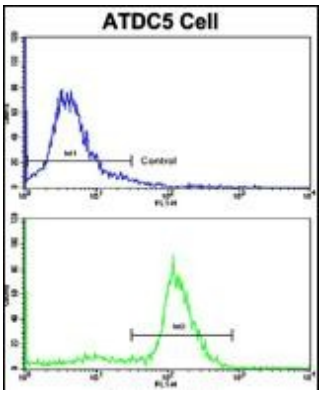
Western blot analysis of ALDH5A1 (arrow) using rabbit polyclonal ALDH5A1 Antibody (N-term) (Cat. #AP1472a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the ALDH5A1 gene (Lane 2) (Origene Technologies).



Anti-ALDH5A1 Antibody (N-term) at 1:1000 dilution + human liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with ALDH5A1 antibody (N-term), 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 cytometric analysis of ATDC5 cells using ALDH5A1 Antibody (N-term) (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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