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ALDH9A1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7850a

Product Information

Application	WB, IHC-P, E
Primary Accession	P49189
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB16866
Calculated MW	53802
Antigen Region	4-34

Additional Information

Gene ID	223
Other Names	4-trimethylaminobutyraldehyde dehydrogenase, TMABADH, Aldehyde dehydrogenase E3 isozyme, Aldehyde dehydrogenase family 9 member A1, Gamma-aminobutyraldehyde dehydrogenase, R-aminobutyraldehyde dehydrogenase, ALDH9A1, ALDH4, ALDH7, ALDH9
Target/Specificity	This ALDH9A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 4-34 amino acids from the N-terminal region of human ALDH9A1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	ALDH9A1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALDH9A1
Synonyms	ALDH4, ALDH7, ALDH9 {ECO:0000303|PubMed:

Function	Converts gamma-trimethylaminobutyraldehyde into gamma- butyrobetaine with high efficiency (in vitro). Can catalyze the irreversible oxidation of a broad range of aldehydes to the corresponding acids in an NAD-dependent reaction, but with low efficiency. Catalyzes the oxidation of aldehydes arising from biogenic amines and polyamines.
Cellular Location	Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q9JLJ3}. Cytoplasm
Tissue Location	Detected in brain (at protein level) (PubMed:8645224). High expression in adult liver, skeletal muscle, and kidney. Low levels in heart, pancreas, lung and brain (PubMed:8786138) Expressed in all regions of the brain. Expression levels are variable in the different brain areas, with the highest levels in the spinal cord and the lowest in the occipital pole.

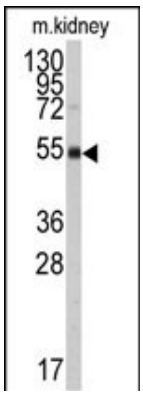
Background

ALDH9A1 belongs to the aldehyde dehydrogenase family of proteins. The protein has a high activity for oxidation of gamma-aminobutyraldehyde and other amino aldehydes. The enzyme catalyzes the dehydrogenation of gamma-aminobutyraldehyde to gamma-aminobutyric acid (GABA). This isozyme is a tetramer of identical 54-kD subunits.

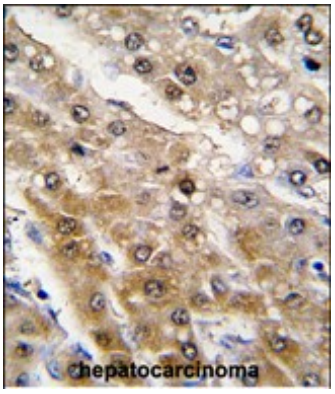
References

Cheung,C.L., Hum. Mol. Genet. 18 (4), 679-687 (2009)
Vaz,F.M., J. Biol. Chem. 275 (10), 7390-7394 (2000)
Lin,S.W., Genomics 34 (3), 376-380 (1996)

Images



Western blot analysis of anti-ALDH9A1 Antibody (N-term) (Cat.#AP7850a) in mouse kidney tissue lysates (35ug/lane). ALDH9A1(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with ALDH9A1 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.

Citations

- Aldehyde dehydrogenases contribute to skeletal muscle homeostasis in healthy, aging, and Duchenne muscular dystrophy patients