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ALDH3A1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7849c

Product Information

Application	IHC-P, WB, E
Primary Accession	P30838
Other Accession	P30907
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	50395
Antigen Region	254-284

Additional Information

Gene ID	218
Other Names	Aldehyde dehydrogenase, dimeric NADP-preferring, ALDHIII, Aldehyde dehydrogenase 3, Aldehyde dehydrogenase family 3 member A1, ALDH3A1, ALDH3
Target/Specificity	This ALDH3A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 254-284 amino acids from the Central region of human ALDH3A1.
Dilution	IHC-P~~1:100~500 WB~~1:1000 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	ALDH3A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALDH3A1
Synonyms	ALDH3

Function	ALDHs play a major role in the detoxification of alcohol- derived acetaldehyde (Probable). They are involved in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation (Probable). Oxidizes medium and long chain aldehydes into non-toxic fatty acids (PubMed:1737758). Preferentially oxidizes aromatic aldehyde substrates (PubMed:1737758). Comprises about 50 percent of corneal epithelial soluble proteins (By similarity). May play a role in preventing corneal damage caused by ultraviolet light (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:P47739}.
Tissue Location	High levels in stomach, esophagus and lung; low level in the liver and kidney

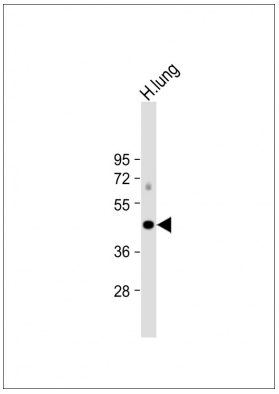
Background

Aldehyde dehydrogenases oxidize various aldehydes to the corresponding acids. They are involved in the detoxification of alcohol-derived acetaldehyde and in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation. ALDH3A1 forms a cytoplasmic homodimer that preferentially oxidizes aromatic and medium-chain (6 carbons or more) saturated and unsaturated aldehyde substrates. The enzyme is thought to promote resistance to UV and 4-hydroxy-2-nonenal-induced oxidative damage in the cornea.

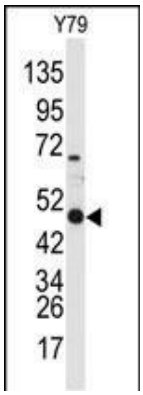
References

Glatt,H., Arch. Biochem. Biophys. 477 (2), 196-205 (2008)
Ekhart,C., Pharmacogenet. Genomics 18 (6), 515-523 (2008)
Giebultowicz,J., Acta Pol Pharm 65 (1), 81-84 (2008)

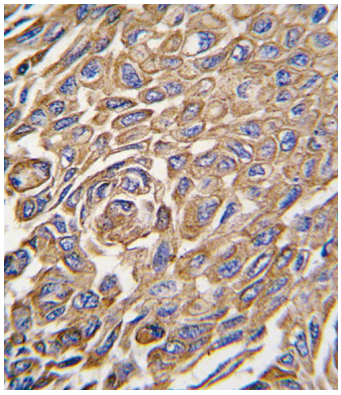
Images



Anti-ALDH3A1 Antibody (Center) at 1:1000 dilution + human lung lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



ALDH3A1 Antibody (Center) (Cat. #AP7849c) western blot analysis in A549,Daudi,Hela cell line lysates (35ug/lane).This demonstrates the ALDH3A1 antibody detected the ALDH3A1 protein (arrow).



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with ALDH3A1 antibody (Center), 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

- Profiling of Aldehyde Dehydrogenase Isoforms in Formed Tumorspheres
- Aldehyde dehydrogenase 3A1 promotes multi-modality resistance and alters gene expression profile in human breast adenocarcinoma MCF-7 cells.

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