

ALDH1A3 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7847a

Specification

ALDH1A3 Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	P47895
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	24-52

ALDH1A3 Antibody (N-term) - Additional Information

Gene ID 220

Other Names

Aldehyde dehydrogenase family 1 member A3, Aldehyde dehydrogenase 6, Retinaldehyde dehydrogenase 3, RALDH-3, RaLDH3, ALDH1A3, ALDH6

Target/Specificity

This ALDH1A3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 24-51 amino acids from the N-terminal region of human ALDH1A3.

Dilution

WB~~1:1000
IHC-P~~1:10~50

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

ALDH1A3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

ALDH1A3 Antibody (N-term) - Protein Information

Name ALDH1A3

Synonyms ALDH6 {ECO:0000303|PubMed:7698756}

Function Catalyzes the NAD-dependent oxidation of aldehyde substrates, such as all-trans-retinal and all-trans-13,14-dihydroretinal, to their corresponding carboxylic acids, all-trans-retinoate and all-trans-13,14-dihydroretinoate, respectively (By similarity) (PubMed:[27759097](#)). High specificity for all-trans-retinal as substrate, can also accept acetaldehyde as substrate in vitro but with lower affinity (PubMed:[27759097](#)). Required for the biosynthesis of normal levels of retinoate in the embryonic ocular and nasal regions; a critical lipid in the embryonic development of the eye and the nasal region (By similarity).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q9JHW9}.

Tissue Location

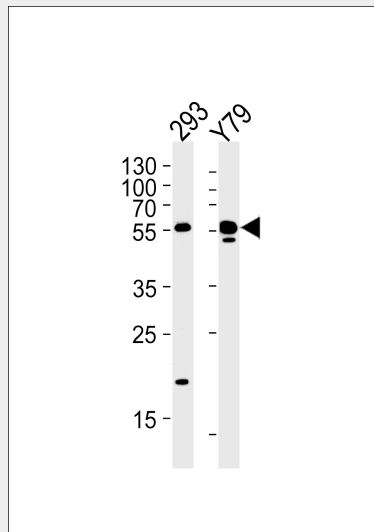
Expressed at low levels in many tissues and at higher levels in salivary gland, stomach, and kidney

ALDH1A3 Antibody (N-term) - Protocols

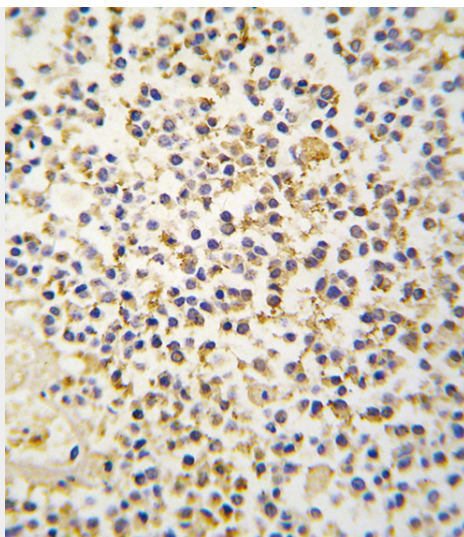
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ALDH1A3 Antibody (N-term) - Images



ALDH1A3 Antibody (N-term) (Cat.# AP7847a) western blot analysis in 293,Y79 cell line lysates (35ug/lane).This demonstrates the ALDH1A3 antibody detected the ALDH1A3 protein (arrow).



Formalin-fixed and paraffin-embedded human kidney tissue reacted with ALDH1A3 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.

ALDH1A3 Antibody (N-term) - Background

Aldehyde dehydrogenase isozymes are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. The enzyme ALDH1A3 uses retinal as a substrate, either in a free or cellular retinol-binding protein form.

ALDH1A3 Antibody (N-term) - References

Rexer, B.N., *Cancer Res.* 61 (19), 7065-7070 (2001)

Yoshida, A., *Eur. J. Biochem.* 251 (3), 549-557 (1998)

ALDH1A3 Antibody (N-term) - Citations

- [The RNA-binding protein MEX3A is a prognostic factor and regulator of resistance to gemcitabine in pancreatic ductal adenocarcinoma.](#)
- [Androgen Receptor signaling promotes the neural progenitor cell pool in the developing cortex.](#)
- [Aldehyde dehydrogenases contribute to skeletal muscle homeostasis in healthy, aging, and Duchenne muscular dystrophy patients.](#)
- [Cancer Stem Cell Biomarkers in EGFR-Mutation-Positive Non-Small-Cell Lung Cancer.](#)
- [A Sox2-Sox9 signalling axis maintains human breast luminal progenitor and breast cancer stem cells.](#)
- [ALDH1A3 is epigenetically regulated during melanocyte transformation and is a target for melanoma treatment.](#)
- [Therapeutic potential of the metabolic modulator phenformin in targeting the stem cell compartment in melanoma.](#)
- [Induced Expression of Cancer Stem Cell Markers ALDH1A3 and Sox-2 in Hierarchical Reconstitution of Apoptosis-resistant Human Breast Cancer Cells.](#)
- [Aldh1 Expression and Activity Increase During Tumor Evolution in Sarcoma Cancer Stem Cell Populations.](#)
- [ALDH Enzyme Expression Is Independent of the Spermatogenic Cycle and Their Inhibition Causes Misregulation of Murine Spermatogenic Processes.](#)
- [Down-regulation of ALDH1A3, CD44 or MDR1 sensitizes resistant cancer cells to FAK autophosphorylation inhibitor Y15.](#)
- [Importance of ALDH1A enzymes in determining human testicular retinoic acid concentrations.](#)

- [Essential role of aldehyde dehydrogenase 1A3 for the maintenance of non-small cell lung cancer stem cells is associated with the STAT3 pathway.](#)
- [Cellular level classification of breast cancer through proteomic markers using nanochannel array sensors.](#)