abcam

ab115198

Anti-ALDH2 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human ALDH2 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P05091
Purification technique	Affinity purification Protein A
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	10 µg/mL
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information ALDH2

Function	Required for clearance of cellular formaldehyde, a cytotoxic and carcinogenic metabolite that induces DNA damage.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	ALDH2 also known as aldehyde dehydrogenase 2 or ADHL2 is a mitochondrial enzyme with a mass of approximately 56 kDa. It resides mainly in the liver although other tissues exhibit expression as well. ALDH2 plays a critical role in metabolizing acetaldehyde a toxic byproduct of alcohol metabolism by converting it into acetate which is less harmful. This process protects cells from the damaging effects of acetaldehyde accumulation.
Biological function summary	ALDH2 serves a detoxifying function by preventing oxidative stress and promoting cellular health. As part of the larger aldehyde dehydrogenase family this enzyme forms homotetramer complexes to efficiently catalyze the oxidation of aldehydes. ALDH2 supplementation may enhance its activity in individuals with reduced function due to genetic polymorphisms providing potential therapeutic benefits.
Pathways	ALDH2 integrates into the alcohol metabolism and retinoic acid signaling pathways. In alcohol metabolism it collaborates with alcohol dehydrogenase enzymes such as ADH1 and ADH2 to process alcohol consumption compounds. In retinoic acid signaling ALDH2 helps regulate the biosynthesis of retinoic acid influencing cell proliferation and differentiation processes.
Associated diseases and disorders	ALDH2 activity impacts conditions like alcohol flush reaction and cardiovascular diseases. Individuals with ALDH2 deficiency often due to genetic variations like ALDH2*2 experience decreased acetaldehyde clearance leading to flush reactions and an increased risk for certain cancers. Additionally inadequate ALDH2 function relates to elevated oxidative stress contributing to cardiovascular disease risk where proteins such as MSD161 may have interactions relevant for therapeutic targeting.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

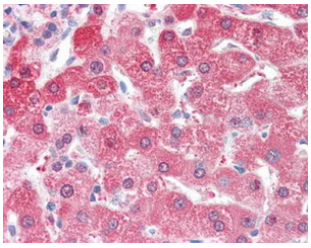
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

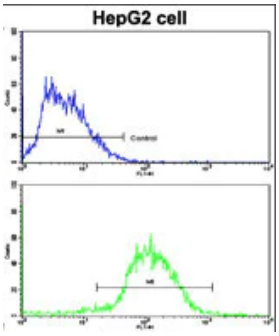
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH2 antibody (ab115198)

ALDH2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ALDH2 antibody

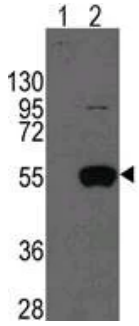
ab115198 at 10 µg/ml staining ALDH2 Formalin-fixed, Paraffin-embedded Human Liver tissue by Immunohistochemistry followed by biotinylated secondary antibody, alkaline phosphatase-streptavidin and chromogen.



Flow Cytometry (Intracellular) - Anti-ALDH2 antibody (ab115198)

ALDH2 Flow Cytometry (Intracellular) staining using rabbit Anti-ALDH2 antibody

Intracellular flow cytometric analysis of HepG2 cells, staining ALDH2 with ab115198 (bottom histogram), compared to a negative control cell (top histogram). A FITC-conjugated goat-anti-rabbit IgG was used as the secondary antibody.



Western blot - Anti-ALDH2 antibody (ab115198)

All lanes:
Western blot - Anti-ALDH2 antibody (ab115198) at 1/50 dilution

Lane 1:
293 cell lysate, non-transfected at 2 µg

Lane 2:
293 cell lysate, transiently transfected with ALDH2 gene at 2 µg

Predicted band size: 56 kDa

Observed band size: 56 kDa

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