abcam

ab231018

Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human ALDH1L1. Database link O75891
Clone number	2A6
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS.

Reactivity data

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

Species	African green monkey
Dilution info	1/500 - 1/2000
Notes	-

Species	Rat
Dilution info	1/500 - 1/2000
Notes	-

Expected

Species	Dog
Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Expected

Species	African green monkey
Dilution info	10 µg/mL
Notes	-

Species	Dog
Dilution info	10 µg/mL
Notes	-

Species	Rat
Dilution info	10 µg/mL
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	African green monkey
Dilution info	1/100
Notes	-

Species	Dog
Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Target data

See full target information ALDH1L1

Function	Cytosolic 10-formyltetrahydrofolate dehydrogenase that catalyzes the NADP(+)-dependent conversion of 10-formyltetrahydrofolate to tetrahydrofolate and carbon dioxide (PubMed:19933275, PubMed:21238436). May also have an NADP(+)-dependent aldehyde dehydrogenase activity towards formaldehyde, acetaldehyde, propionaldehyde, and benzaldehyde (By similarity).

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
Storage information	Avoid freeze / thaw cycle

Supplementary info

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

Activity summary	ALDH1L1 also known as 10-formyltetrahydrofolate dehydrogenase plays an important role as a metabolic enzyme involved in folate metabolism. Typically ALDH1L1 has a molecular mass of around 100 kDa. You can find this protein expressed strongly in the liver and brain particularly in astrocytes where it serves as a marker for these star-shaped glial cells. The expression of ALDH1L1 indicates its significant presence in these tissues helping researchers identify and study astrocyte function more effectively.
Biological function summary	ALDH1L1 is involved in the one-carbon metabolism pathway contributing to the conversion of formyl groups into CO2. This reaction aids in regulating cellular homeostasis and energy production. Within the biological context ALDH1L1 works independently and does not form a large complex but efficiently interacts with other enzymes involved in folate transformations. Its activity ensures proper folate cycle functioning supporting DNA synthesis and repair.
Pathways	ALDH1L1 importantly integrates into the folate metabolism pathway supporting detoxification and nucleotide biosynthesis. In this pathway ALDH1L1 interacts with the MTHFD1 protein to maintain the balance of one-carbon units necessary for nucleic acid synthesis. Furthermore ALDH1L1 interplays within the methionine cycle influencing the methylation processes important for gene expression and epigenetic regulation.
Associated diseases and disorders	ALDH1L1 has associations with neurological conditions particularly Alzheimer's disease and glioblastoma. Changes in ALDH1L1 expression levels have implication in the progression of these diseases. In the context of glioblastoma researchers observe altered ALDH1L1 expression alongside traditional astrocyte markers like GFAP in the tumor microenvironment. Understanding ALDH1L1's role in these conditions could provide insights for developing therapeutic strategies targeting astrocyte behavior.

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.

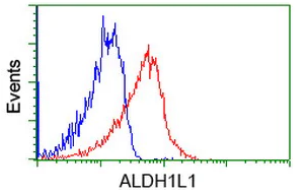
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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Terms & Conditions.

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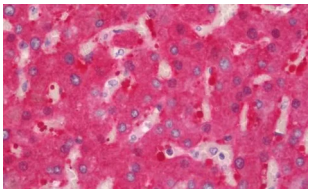
5 product images



Flow Cytometry (Intracellular) - Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker (ab231018)

ALDH1L1 Flow Cytometry (Intracellular) staining using mouse Anti-ALDH1L1 antibody

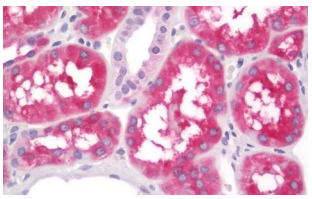
Intracellular flow cytometric analysis ofJurkat (human T cell leukemia cell line from peripheral blood) cell line labeling ALDH1L1 with ab231018 at 1/100 dilution (red) compared with anon-specific negative control antibody (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker (ab231018)

ALDH1L1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-ALDH1L1 antibody

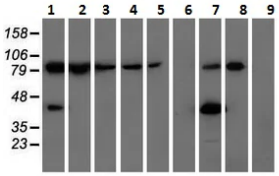
Formalin-fixed, paraffin-embedded human liver tissue stained for ALDH1L1 using ab231018 at 10 µg/ml in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker (ab231018)

ALDH1L1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-ALDH1L1 antibody

Formalin-fixed, paraffin-embedded human kidney tissue stained for ALDH1L1 using ab231018 at 10 µg/ml in immunohistochemical analysis.



Western blot - Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker (ab231018)

ALDH1L1 Western blot staining using mouse Anti-ALDH1L1 antibody

All lanes:
Western blot - Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker (ab231018) at 1/500 dilution

Lane 1:
HepG2 (human liver hepatocellular carcinoma cell line) whole cell lysate at 35 µg

Lane 2:
HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 35 µg

Lane 3:
HT-29 (human colorectal adenocarcinoma cell line) whole cell lysate at 35 µg

Lane 4:
A549 (human lung carcinoma cell line) whole cell lysate at 35 µg

Lane 5:
COS-7 (African green monkey kidney fibroblast-like cell line) whole cell lysate at 35 µg

Lane 6:
Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate at 35 µg

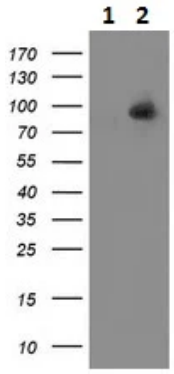
Lane 7:
MDCK (canine kidney cell line) whole cell lysate at 35 µg

Lane 8:
PC-12 (rat adrenal gland pheochromocytoma cell line) whole cell lysate at 35 µg

Lane 9:
MCF7 (human breast adenocarcinoma cell line) whole cell lysate at 35 µg

Developed using the ECL technique.

Predicted band size: 99 kDa



Western blot - Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker (ab231018)

ALDH1L1 Western blot staining using mouse Anti-ALDH1L1 antibody

All lanes:
Western blot - Anti-ALDH1L1 antibody [2A6] - Astrocyte Marker (ab231018) at 1/500 dilution

Lane 1:
pCMV6-ENTRY control-transfected HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 5 µg

Lane 2:
pCMV6-ENTRY ALDH1L1-transfected HEK-293T whole cell lysate at 5 µg

Developed using the ECL technique.

Predicted band size: 99 kDa

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