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PRODUCT DATASHEET

Anti-ALDH1A1 (N-terminal region) Antibody

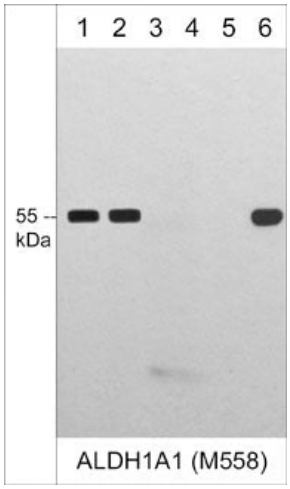
phosphosolutions ANTIBODIES THAT WORK

Product Details

Available Variants	100 µL (SKU:AM5581)
Conjugate	Unconjugated
Isotype	IgG1
Clone	M558
Gene Name	ALDH1A1
Host Species	Mouse
Format	Protein G Purified
Physical State	Liquid
Buffer	PBS + 1 mg/ml BSA, 0.05% NaN3 and 50% glycerol
Applications	ELISA, WB
Dilution Ranges	WB: 1:1000
Species Reactivity	Human, Mouse, Rat
Immunogen	Clone M558 was generated from a recombinant protein corresponding to amino acids in the N-terminal region from human ALDH1A1. This sequence is highly conserved in rat and mouse ALDH1A1.
Specificity	This antibody antibody detects a 55 kDa* protein on SDS-PAGE immunoblots of human A431, HepG2, and mouse liver, as well as human recombinant ALDH1A1. The antibody does not detect ALDH1A3 in PC3 cells, ALDH1A2 in Jurkat cells, and bovine tubulin (55 kDa).
Molecular Weight	55
Quality Control	Western blots performed on each lot.

Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
UniProt ID	P00352 UniProt Summary: Cytosolic dehydrogenase that catalyzes the irreversible oxidation of a wide range of aldehydes to their corresponding carboxylic acid. Functions downstream of retinol dehydrogenases and catalyzes the oxidation of retinaldehyde into retinoic acid, the second step in the oxidation of retinol/vitamin A into retinoic acid. This pathway is crucial to control the levels of retinol and retinoic acid, two important molecules which excess can be teratogenic and cytotoxic. Also oxidizes aldehydes resulting from lipid peroxidation like (E)-4-hydroxynon-2-enal/HNE, malonaldehyde and hexanal that form protein adducts and are highly cytotoxic. By participating for instance to the clearance of (E)-4-hydroxynon-2-enal/HNE in the lens epithelium prevents the formation of HNE-protein adducts and lens opacification. Also functions downstream of fructosamine-3-kinase in the fructosamine degradation pathway by catalyzing the oxidation of 3-deoxyglucosone, the carbohydrate product of fructosamine 3-phosphate decomposition, which is itself a potent glycating agent that may react with lysine and arginine side-chains of proteins. Also has an aminobutyraldehyde dehydrogenase activity and is probably part of an alternative pathway for the biosynthesis of GABA/4-aminobutanoate in midbrain, thereby playing a role in GABAergic synaptic transmission.
Country of Origin	United States
Shipping	Blue Ice
Expiration	After date of receipt, stable for at least 1 year at -20°C.
Usage Statement	For research use only. Not intended for therapeutic or diagnostic use. Use of all products is subject to our terms and conditions, which can be viewed on our website.
NCBI Gene ID	216

Product Images



Western blot image of human A431 (lane 1), HepG2 (lane 2), PC3 (lane 3), Jurkat (lane 4), bovine tubulin (lane 5), and recombinant human ALDH1A1 (lane 6). The blot was probed with mouse monoclonal ALDH1A1 M558 (lanes 1-6) at a dilution of 1:1,000.