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Anti-ALDH1B1 Picoband Antibody

Catalog # ABO11655

Product Information

Application	WB
Primary Accession	P30837
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Aldehyde dehydrogenase X, mitochondrial(ALDH1B1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	219
Other Names	Aldehyde dehydrogenase X, mitochondrial, 1.2.1.3, Aldehyde dehydrogenase 5, Aldehyde dehydrogenase family 1 member B1, ALDH1B1, ALDH5, ALDHX
Calculated MW	57249
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Mitochondrion matrix.
Tissue Specificity	Liver, testis and to a lesser extent in brain.
Source	Eukaryota
Protein Name	Aldehyde dehydrogenase X, mitochondrial
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ALDH1B1 (116-156aa RVYLASLETLDNGKPFQESYALDLDEVIKVYRYFAGWADK W), different from the related mouse sequence by one amino acid, and from the related rat sequence by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated

freezing and thawing.

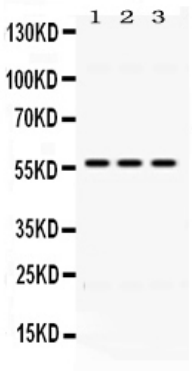
Protein Information

Name	ALDH1B1 (HGNC:407)
Function	Broad specificity, mitochondrial aldehyde dehydrogenase that could play a role in the detoxification of alcohol-derived acetaldehyde and other aldehydes (PubMed:20616185, PubMed:25413692, PubMed:35788181). Shows an absolute preference for NAD(+) as no activity is detected with NADP(+) (PubMed:20616185, PubMed:25413692). Has a high affinity and catalytic efficiency toward aliphatic medium- chain saturated aldehydes relative to short-chain and aromatic aldehydes in vitro (PubMed:20616185). Also capable of metabolizing products of lipid peroxidation, namely 4-hydroxynon-2-enal(4-HNE) and malonaldehyde (MDA) but with lower catalytic efficiency (PubMed:20616185). In vitro, it can also display a nitroglycerin reductase activity (PubMed:25413692). Has also an esterase activity in vitro, but this may be not physiologically relevant in vivo (PubMed:20616185).
Cellular Location	Mitochondrion matrix
Tissue Location	Liver, testis and to a lesser extent in brain.

Background

Aldehyde dehydrogenase X, mitochondrial is an enzyme that in humans is encoded by the ALDH1B1 gene. This protein belongs to the aldehyde dehydrogenases family of proteins. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. This gene does not contain introns in the coding sequence. The variation of this locus may affect the development of alcohol-related problems.

Images



Western blot analysis of ALDH1B1 expression in rat liver extract (lane 1), mouse liver extract (lane 2) and HELA whole cell lysates (lane 3). ALDH1B1 at 57KD was detected using rabbit anti- ALDH1B1 Antigen Affinity purified polyclonal antibody (Catalog # ABO11655) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .