10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Aldh2 Antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI14289

Product Information

Application	WB
Primary Accession	P47738
Other Accession	NM_009656, NP_033786
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	56538

Additional Information

Gene ID	11669
Alias Symbol	Ahd-5, Ahd5
Other Names	Aldehyde dehydrogenase, mitochondrial, 1.2.1.3, AHD-M1, ALDH class 2, ALDH-E2, ALDHI, Aldh2, Ahd-1, Ahd1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Aldh2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Aldh2 Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Aldh2 {ECO:0000312|MGI:MGI:99600}
Synonyms	Ahd-1, Ahd1
Function	Mitochondrial aldehyde dehydrogenase with broad substrate specificity which participates in the detoxification of ethanol-derived acetaldehyde and endogenous aldehydes, including those arising from lipid peroxidation (PubMed:8058062). The reaction mechanism involves a nucleophilic attack on the aldehyde substrate, resulting in formation of a thiohemiacetal intermediate. Subsequent hydride transfer to NAD+, yields a thioester intermediate which is hydrolyzed to the carboxylic acid product through activation of a water molecule by the catalytic glutamate. In vivo, ALDH2 is

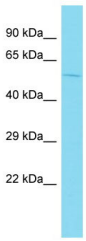
required for the clearance of formaldehyde, a cytotoxic and carcinogenic endogenous metabolite that induces DNA damage. It also catalyzes the oxidation of 3,4- dihydroxyphenylacetaldehyde (DOPAL), a reactive intermediate of dopamine catabolism, to 3,4-dihydroxyphenylacetate (DOPAC) (By similarity). ALDH2 may also catalyze the oxidation of 4-aminobutanal (gamma-aminobutyraldehyde) to 4-aminobutanoate (GABA), representing an alternative route for GABA biosynthesis from polyamine catabolism (By similarity). In vitro, ALDH2 catalyzes the oxidation of acrolein, malondialdehyde, and 4-hydroxynonenal (4-HNE). It also exhibits esterase activity that is enhanced by NAD+ but does not require it, although the physiological relevance of this activity remains unclear (By similarity).

Cellular Location Mitochondrion {ECO:0000250|UniProtKB:P05091}.

References

Chang C.,et al.Gene 148:331-336(1994).
Chen M.,et al.Mol. Pharmacol. 46:88-96(1994).
Lubec G.,et al.Submitted (JAN-2009) to UniProtKB.
Caubin J.,et al.Nucleic Acids Res. 22:4132-4138(1994).
Park J.,et al.Mol. Cell 50:919-930(2013).

Images



Host: Rabbit
Target Name: Aldh2
Sample Tissue: Mouse Small Intestine lysates
Antibody Dilution: 1.0µg/ml

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