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

ALDH3A2 Mouse mAb

Catalog # AP99901

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P51648
Other Accession	P51648
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	54848
Physical State	Liquid
Immunogen	Recombinant human ALDH3A2.
Isotype	IgG1,IgK
Purity	affinity purified by Protein G
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the aldehyde dehydrogenase family.
DISEASE	Defects in ALDH3A2 are the cause of Sjoegren-Larsson syndrome (SLS) [MIM:270200]. SLS is an autosomal recessive neurocutaneous disorder characterized by a combination of severe mental retardation, spastic di- or tetraplegia and congenital ichthyosis (increased keratinization). Ichthyosis is usually evident at birth, neurologic symptoms appear in the first or second year of life. Most patients have an IQ of less than 60. Additional clinical features include glistening white spots on the retina, seizures, short stature and speech defects.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Aldehyde dehydrogenases (ALDHs) mediate the NADP+-dependent oxidation of aldehydes into acids and play an important role in the detoxification of alcohol-derived acetaldehyde, as well as in lipid peroxidation and in the metabolism of corticosteroids, biogenic amines and neurotransmitters. ALDH3A2 (aldehyde dehydrogenase 3 family, member A2), also known as SLS, FALDH or ALDH10, is a 485 amino acid single-pass membrane protein that localizes to the cytoplasmic side of the endoplasmic reticulum and belongs to the aldehyde dehydrogenase family. Expressed in a variety of tissues, including liver, heart, lung, brain, kidney and placenta, ALDH3A2 catalyzes the NAD+-dependent oxidation of long-chain aliphatic aldehydes to fatty acids, a process that is necessary for detoxification and lipid metabolism. Defects in the gene encoding ALDH3A2 are the cause of Sjoegren-Larsson syndrome (SLS), an autosomal recessive neurocutaneous disorder characterized by severe mental retardation, seizures and speech defects. Multiple isoforms of ALDH3A2 exist due to alternative splicing events.

Additional Information

Gene ID	224

Other Names	ALDH10; FALDH; SLS; AL3A2_HUMAN; ALDH3A2; Aldehyde dehydrogenase 10; Fatty aldehyde dehydrogenase; Microsomal aldehyde dehydrogenase; 1.2.1.3; 1.2.1.94; aldehyde dehydrogenase 3 family member A2; aldehyde dehydrogenase 3 family, member A2
Dilution	WB=1:500-1000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ALDH3A2
Function	Catalyzes the oxidation of medium and long chain aliphatic aldehydes to fatty acids. Active on a variety of saturated and unsaturated aliphatic aldehydes between 6 and 24 carbons in length (PubMed:18035827, PubMed:18182499, PubMed:22633490, PubMed:25047030, PubMed:9133646, PubMed:9662422). Responsible for conversion of the sphingosine 1-phosphate (S1P) degradation product hexadecenal to hexadecenoic acid (PubMed:22633490).
Cellular Location	Microsome membrane; Single-pass membrane protein. Endoplasmic reticulum membrane; Single-pass membrane protein; Cytoplasmic side {ECO:0000250|UniProtKB:P30839}
Tissue Location	Detected in liver (at protein level).

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