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Aldh3A2 Antibody

Catalog # ASC10760

Product Information

Application	WB, E
Primary Accession	P51648
Other Accession	NP_001026976, 73466520
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	54848
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Aldh3A2 antibody can be used for detection of Aldh3A2 by Western blot at 1 - 2 □g/mL.

Additional Information

Gene ID	224
Other Names	Fatty aldehyde dehydrogenase, 1.2.1.3, Aldehyde dehydrogenase 10, Aldehyde dehydrogenase family 3 member A2, Microsomal aldehyde dehydrogenase, ALDH3A2, ALDH10, FALDH
Target/Specificity	ALDH3A2; At least four isoforms of Aldh3A2 are known to exist. This antibody is predicted to have no cross-reactivity to Aldh3A1.
Reconstitution & Storage	Aldh3A2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Aldh3A2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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).

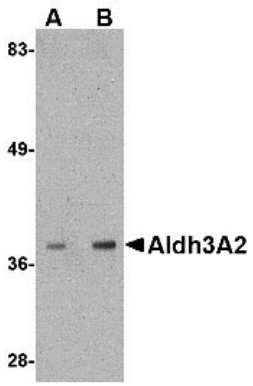
Background

Aldh3A2 Antibody: Aldh3A2 is a member of the aldehyde dehydrogenase superfamily, a group of NAD(P)(+)-dependent enzymes that catalyze the oxidation of a wide spectrum of aliphatic and aromatic aldehydes. Aldehyde dehydrogenase enzymes are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. Aldh3A2 catalyzes the oxidation of long-chain aliphatic aldehydes to fatty acids. Mutations in the Aldh3A2 gene cause Sjogren-Larrson syndrome, an inherited neurocutaneous disorder. Patients with this disorder display ichthyosis, mental retardation and spastic diplegia. The pathogenesis of the cutaneous and neurological symptoms is thought to result from abnormal lipid accumulation in the membranes of skin and brain, the formation of aldehyde Schiff base adducts with amine-containing lipids or proteins, or defective eicosanoid metabolism.

References

Vasiliou V and Pappa A. Polymorphisms of human aldehyde dehydrogenases. Consequences for drug metabolism and disease. Pharmacology2000; 61:192-8.
Rizzo WB. Sjogren-Larsson syndrome: molecular genetics and biochemical pathogenesis of fatty aldehyde dehydrogenase deficiency. Mol. Genet. Metab.2007; 90:1-9.

Images



Western blot analysis of Aldh3A2 in mouse liver lysate with Aldh3A2 antibody at (A) 1 and (B) 2 µg/mL.