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

Aldh5A1 Antibody

Catalog # ASC10769

Product Information

Application	WB, E
Primary Accession	P51649
Other Accession	NP_733936, 25777721
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	57215
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Aldh5A1 antibody can be used for detection of Aldh5A1 by Western blot at 1 - 2 □g/mL.

Additional Information

Gene ID	7915
Other Names	Succinate-semialdehyde dehydrogenase, mitochondrial, 1.2.1.24, Aldehyde dehydrogenase family 5 member A1, NAD(+)-dependent succinic semialdehyde dehydrogenase, ALDH5A1, SSADH
Target/Specificity	ALDH5A1;
Reconstitution & Storage	Aldh5A1 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	Aldh5A1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALDH5A1 (HGNC:408)
Synonyms	SSADH
Function	Catalyzes one step in the degradation of the inhibitory neurotransmitter gamma-aminobutyric acid (GABA).
Cellular Location	Mitochondrion.
Tissue Location	Brain, pancreas, heart, liver, skeletal muscle and kidney. Lower in placenta

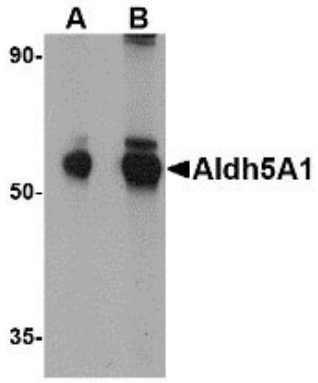
Background

Aldh5A1 Antibody: Aldh5A1 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. Aldh5A1 is a mitochondrial NAD(+)-dependent succinic semialdehyde dehydrogenase. A deficiency of this enzyme, known as 4-hydroxybutyricaciduria, results in a disorder of the neurotransmitter 4-aminobutyric acid (GABA). Symptoms usually include static encephalopathy, associated with developmental delays, hypotonia, ataxia, speech defects, and seizures. At least two isoforms of Aldh5A1 are known to exist.

References

Vasiliou V and Pappa A. Polymorphisms of human aldehyde dehydrogenases. Consequences for drug metabolism and disease. Pharmacology2000; 61:192-8.
Hearl WG and Churchich JE. Interactions between4-aminobutyrate aminotransferase and succinic semialdehyde dehydrogenase, two mitochondrial enzymes. J. Biol. Chem.1984; 259:11459-63.
Gibson KM, Sweetman L, Nyhan WL, et al. Succinic semialdehyde dehydrogenase deficiency: an inborn error of gamma-aminobutyric acid metabolism. Clin. Chim. Acta1983; 133:33-42.

Images



Western blot analysis of Aldh5A1 in mouse liver lysate with Aldh5A1 antibody at (A) 1 and (B) 2 µg/mL.