

ALDH3B2 (T-13): sc-109919

BACKGROUND

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. ALDH3B2 (aldehyde dehydrogenase 3 family, member B2), also known as ALDH8, is a 385 amino acid protein that belongs to the ALDH family and is involved in the pathway of alcohol metabolism. Expressed in salivary gland tissue, ALDH3B2 functions to catalyze the NADP⁺-dependent conversion of an aldehyde into an acid. The gene encoding ALDH3B2 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

1. Yoshida, A. 1992. Molecular genetics of human aldehyde dehydrogenase. *Pharmacogenetics* 2: 139-147.
2. Hsu, L.C., et al. 1995. Cloning and characterization of genes encoding four additional human aldehyde dehydrogenase isozymes. *Adv. Exp. Med. Biol.* 372: 159-168.
3. Hsu, L.C. and Chang, W.C. 1996. Sequencing and expression of the human ALDH8 encoding a new member of the aldehyde dehydrogenase family. *Gene* 174: 319-322.
4. Hsu, L.C., et al. 1997. Human aldehyde dehydrogenase genes, ALDH7 and ALDH8: genomic organization and gene structure comparison. *Gene* 189: 89-94.
5. Yoshida, A., et al. 1998. Human aldehyde dehydrogenase gene family. *Eur. J. Biochem.* 251: 549-557.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 601917. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Lloyd, M.D., et al. 2007. Characterisation of recombinant human fatty aldehyde dehydrogenase: implications for Sjögren-Larsson syndrome. *J. Enzyme Inhib. Med. Chem.* 22: 584-590.

CHROMOSOMAL LOCATION

Genetic locus: ALDH3B2 (human) mapping to 11q13.2.

SOURCE

ALDH3B2 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ALDH3B2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109919 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ALDH3B2 (T-13) is recommended for detection of ALDH3B2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ALDH family members .

Suitable for use as control antibody for ALDH3B2 siRNA (h): sc-96982, ALDH3B2 shRNA Plasmid (h): sc-96982-SH and ALDH3B2 shRNA (h) Lentiviral Particles: sc-96982-V.

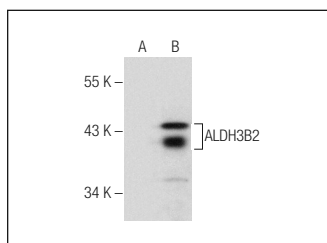
Molecular Weight of ALDH3B2: 43 kDa.

Positive Controls: ALDH3B2 (h): 293T Lysate: sc-158260.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ALDH3B2 (T-13): sc-109919. Western blot analysis of ALDH3B2 expression in non-transfected: sc-117752 (A) and human ALDH3B2 transfected: sc-158260 (B) 293T whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.