

ALDH1L2 (S-16): sc-244884

BACKGROUND

Aldehyde dehydrogenases (ALDHs) mediate NADP⁺-dependent oxidation of aldehydes into acids during detoxification of alcohol-derived acetaldehyde, lipid peroxidation and metabolism of corticosteroids, biogenic amines and neurotransmitters. ALDH1L2 (aldehyde dehydrogenase 1 family, member L2), also known as probable 10-formyltetrahydrofolate dehydrogenase ALDH1L2 or mtFDH (mitochondrial 10-formyltetrahydrofolate dehydrogenase), is a 923 amino acid protein belonging to the aldehyde dehydrogenase family and the ALDH1L subfamily. Encoded by a gene that maps to human chromosome 12q23.3, ALDH1L2 is composed of 23 exons, contains one acyl carrier domain and exists as 3 alternatively spliced isoforms. ALDH1L2 participates in acyl carrier activity, cofactor binding, formyltetrahydrofolate dehydrogenase functions, transferase activities and phosphopantetheine binding.

REFERENCES

- Vasilio, V., et al. 2005. Analysis and update of the human aldehyde dehydrogenase (ALDH) gene family. *Hum. Genomics* 2: 138-143.
- Sherva, R., et al. 2009. Associations and interactions between SNPs in the alcohol metabolizing genes and alcoholism phenotypes in European Americans. *Alcohol. Clin. Exp. Res.* 33: 848-857.
- Black, W.J., et al. 2009. Human aldehyde dehydrogenase genes: alternatively spliced transcriptional variants and their suggested nomenclature. *Pharmacogenet. Genomics* 19: 893-902.
- Wang, L.L., et al. 2010. Phenotype prediction of deleterious nonsynonymous single nucleotide polymorphisms in human alcohol metabolism-related genes: a bioinformatics study. *Alcohol* 44: 425-438.
- Dombroski, B.A., et al. 2010. Gene expression and genetic variation in response to endoplasmic reticulum stress in human cells. *Am. J. Hum. Genet.* 86: 719-729.
- Hart, S.N., et al. 2010. A comparison of whole genome gene expression profiles of HepaRG cells and HepG2 cells to primary human hepatocytes and human liver tissues. *Drug Metab. Dispos.* 38: 988-994.
- Strickland, K.C., et al. 2010. Acyl carrier protein-specific 4'-phosphopantetheinyl transferase activates 10-formyltetrahydrofolate dehydrogenase. *J. Biol. Chem.* 285: 1627-1633.

CHROMOSOMAL LOCATION

Genetic locus: ALDH1L2 (human) mapping to 12q23.3; Aldh1l2 (mouse) mapping to 10 C1.

SOURCE

ALDH1L2 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ALDH1L2 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-244884 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ALDH1L2 (S-16) is recommended for detection of ALDH1L2 of mouse, rat and 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 ALDH1L1.

ALDH1L2 (S-16) is also recommended for detection of ALDH1L2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ALDH1L2 siRNA (h): sc-96049, ALDH1L2 siRNA (m): sc-141001, ALDH1L2 shRNA Plasmid (h): sc-96049-SH, ALDH1L2 shRNA Plasmid (m): sc-141001-SH, ALDH1L2 shRNA (h) Lentiviral Particles: sc-96049-V and ALDH1L2 shRNA (m) Lentiviral Particles: sc-141001-V.

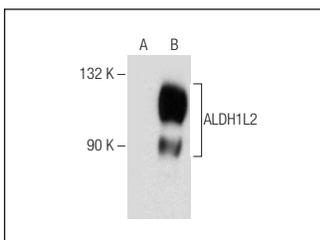
Molecular Weight of ALDH1L2: 102 kDa.

Positive Controls: ALDH1L2 (m): 293T Lysate: sc-118341.

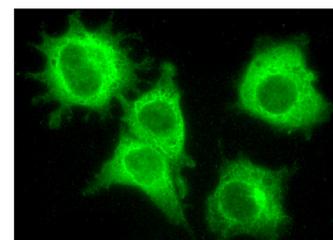
RECOMMENDED SECONDARY REAGENTS

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



ALDH1L2 (S-16): sc-244884. Western blot analysis of ALDH1L2 expression in non-transfected: sc-117752 (A) and mouse ALDH1L2 transfected: sc-118341 (B) 293T whole cell lysates.



ALDH1L2 (S-16): sc-244884. Immunofluorescence staining of formalin-fixed HepG2 cells showing cytoplasmic localization.

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.