

ALDH6A1 (N-14): sc-107137

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. ALDH6A1 (aldehyde dehydrogenase family 6 member A1), also known as MMSDH or MMSADHA, is a 535 amino acid mitochondrial protein that belongs to the aldehyde dehydrogenase family. Considered a mitochondrial methylmalonate semialdehyde dehydrogenase, ALDH6A1 catalyzes the irreversible oxidative decarboxylation of malonate and methylmalonate semialdehydes to acetyl- and propionyl-CoA. It is suggested that ALDH6A1 plays a role in the valine and pyrimidine catabolic pathways.

CHROMOSOMAL LOCATION

Genetic locus: ALDH6A1 (human) mapping to 14q24.3; Aldh6a1 (mouse) mapping to 12 D1.

SOURCE

ALDH6A1 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ALDH6A1 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-107137 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

ALDH6A1 (N-14) is recommended for detection of ALDH6A1 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), immunohistochemistry (including paraffin-embedded sections) (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.

ALDH6A1 (N-14) is also recommended for detection of ALDH6A1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ALDH6A1 siRNA (h): sc-92361, ALDH6A1 siRNA (m): sc-141004, ALDH6A1 shRNA Plasmid (h): sc-92361-SH, ALDH6A1 shRNA Plasmid (m): sc-141004-SH, ALDH6A1 shRNA (h) Lentiviral Particles: sc-92361-V and ALDH6A1 shRNA (m) Lentiviral Particles: sc-141004-V.

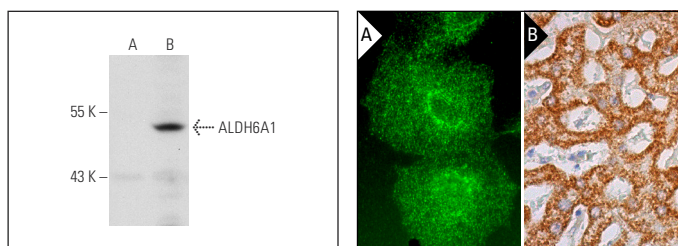
Molecular Weight of ALDH6A1: 58 kDa.

Positive Controls: ALDH6A1 (h): 293T Lysate: sc-114910 or Hep G2 cell lysate: sc-2227.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ALDH6A1 (N-14): sc-107137. Western blot analysis of ALDH6A1 expression in non-transfected: sc-117752 (A) and human ALDH6A1 transfected: sc-114910 (B) 293T whole cell lysates.

ALDH6A1 (N-14): sc-107137. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (B).

STORAGE

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

PROTOCOLS

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