

ALDH9A1 (F-6): sc-398054



The Power to Question

BACKGROUND

Aldehyde dehydrogenases (ALDHs) mediate the NAD⁺-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. ALDH9A1 (aldehyde dehydrogenase family 9 member A1), also known as E3, ALDH4, ALDH7, ALDH9 or TMABADH, is a 494 amino acid cytoplasmic protein that is highly expressed in adult liver, skeletal muscle, kidney and embryonic brain. ALDH9A1 converts γ -trimethylaminobutyraldehyde into γ -butyrobetaine and catalyzes the irreversible oxidation of a broad range of aldehydes to the corresponding acids in a NAD-dependent reaction.

REFERENCES

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- Sophos, N.A., et al. 2003. Aldehyde dehydrogenase gene superfamily: the 2002 update. *Chem. Biol. Interact.* 143-144: 5-22.
- Aldenhoven, J., et al. 2003. Improving the comparative map of porcine chromosome 10 with respect to human chromosomes 1, 9 and 10. *Cytogenet. Genome Res.* 102: 121-127.
- Vasilou, V., et al. 2005. Analysis and update of the human aldehyde dehydrogenase (ALDH) gene family. *Hum. Genomics* 2: 138-143.
- Sato, W., et al. 2006. Hepatic gene expression in hepatocyte-specific Pten deficient mice showing steatohepatitis without ethanol challenge. *Hepatol. Res.* 34: 256-265.

CHROMOSOMAL LOCATION

Genetic locus: ALDH9A1 (human) mapping to 1q24.1; Aldh9a1 (mouse) mapping to 1 H2.3.

SOURCE

ALDH9A1 (F-6) is a mouse monoclonal antibody raised against amino acids 219-518 mapping at the C-terminus of ALDH9A1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALDH9A1 (F-6) is available conjugated to agarose (sc-398054 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398054 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398054 PE), fluorescein (sc-398054 FITC), Alexa Fluor[®] 488 (sc-398054 AF488), Alexa Fluor[®] 546 (sc-398054 AF546), Alexa Fluor[®] 594 (sc-398054 AF594) or Alexa Fluor[®] 647 (sc-398054 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398054 AF680) or Alexa Fluor[®] 790 (sc-398054 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ALDH9A1 (F-6) is recommended for detection of ALDH9A1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for ALDH9A1 siRNA (h): sc-88344, ALDH9A1 siRNA (m): sc-105052, ALDH9A1 shRNA Plasmid (h): sc-88344-SH, ALDH9A1 shRNA Plasmid (m): sc-105052-SH, ALDH9A1 shRNA (h) Lentiviral Particles: sc-88344-V and ALDH9A1 shRNA (m) Lentiviral Particles: sc-105052-V.

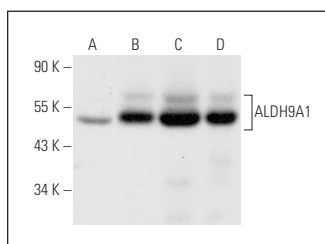
Molecular Weight of ALDH9A1: 54 kDa.

Positive Controls: human kidney extract: sc-363764, human liver extract: sc-363766 or Hep G2 cell lysate: sc-2227.

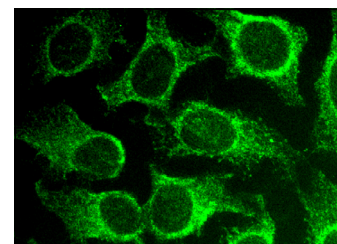
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



ALDH9A1 (F-6): sc-398054. Western blot analysis of ALDH9A1 expression in Hep G2 whole cell lysate (A) and human skeletal muscle (B), human liver (C) and human kidney (D) tissue extracts.



ALDH9A1 (F-6): sc-398054. Immunofluorescence staining of methanol-fixed HeLa 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.