

# ALDH8A1 (E-16): sc-109196

## BACKGROUND

Aldehyde dehydrogenases (ALDHs) mediate the NADP<sup>+</sup>-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. ALDH8A1 (aldehyde dehydrogenase 8 family, member A1), also known as ALDH12, is a 487 amino acid protein that localizes to the cytoplasm and belongs to the aldehyde dehydrogenase family. Expressed in kidney and liver, ALDH8A1 converts 9-*cis*-retinal to 9-*cis*-retinoic acid. 9-*cis*-retinoic acid activates retinoid X receptors, a family of nuclear receptors which are involved in regulating multiple signaling pathways. Three isoforms exist due to alternative splicing events.

## REFERENCES

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- Vasilou, V., et al. 2000. Polymorphisms of human aldehyde dehydrogenases. Consequences for drug metabolism and disease. *Pharmacology* 61: 192-198.
- Zhuang, R., et al. 2002. *cis*-Retinol/androgen dehydrogenase, isozyme 3 (CRAD3): a short-chain dehydrogenase active in a reconstituted path of 9-*cis*-retinoic acid biosynthesis in intact cells. *Biochemistry* 41: 3477-3483.
- Ahuja, H.S., et al. 2003. The retinoid X receptor and its ligands: versatile regulators of metabolic function, cell differentiation and cell death. *J. Biol. Regul. Homeost. Agents.* 17: 29-45.
- Close, J., et al. 2004. Genome annotation of a 1.5 Mb region of human chromosome 6q23 encompassing a quantitative trait locus for fetal hemoglobin expression in adults. *BMC Genomics* 5: 33.
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- Wolf, G. 2006. Is 9-*cis*-retinoic acid the endogenous ligand for the retinoic acid-X receptor? *Nutr. Rev.* 64: 532-538.

## CHROMOSOMAL LOCATION

Genetic locus: ALDH8A1 (human) mapping to 6q23.3; Aldh8a1 (mouse) mapping to 10 A3.

## SOURCE

ALDH8A1 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ALDH8A1 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-109196 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ALDH8A1 (E-16) is recommended for detection of ALDH8A1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 ALDH8A1 siRNA (h): sc-95150, ALDH8A1 siRNA (m): sc-141005, ALDH8A1 shRNA Plasmid (h): sc-95150-SH, ALDH8A1 shRNA Plasmid (m): sc-141005-SH, ALDH8A1 shRNA (h) Lentiviral Particles: sc-95150-V and ALDH8A1 shRNA (m) Lentiviral Particles: sc-141005-V.

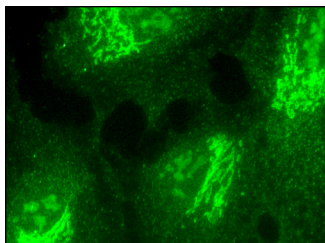
Molecular Weight of ALDH8A1: 53 kDa.

Positive Controls: mouse liver extract: sc-2256 or mouse kidney extract: sc-2255.

## 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) 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



ALDH8A1 (E-16): sc-109196. Immunofluorescence staining of formalin-fixed Hep G2 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.