

ALDH16A1 (T-14): sc-167072

BACKGROUND

ALDH16A1 (aldehyde dehydrogenase 16 family, member A1) is an 802 amino acid protein belonging to the aldehyde dehydrogenase superfamily. Family members react with aldehyde substrates and enlist nicotinamide adenine dinucleotide phosphate (NADP) as a cofactor. ALDH16A1 participates in oxidoreductase activity, protein binding and interacts with Masparidin, a protein linked to Mast syndrome. Encoded by a gene that maps to human chromosome 19q13.33, ALDH16A1 exists as 2 alternatively spliced isoforms and contains 17 exons. ALDH16A1 is conserved in chimpanzee, canine, bovine, mouse, rat and zebrafish; however, a cysteine active site and glutamate residues are not conserved.

REFERENCES

- Vasiliou, V., et al. 2005. Analysis and update of the human aldehyde dehydrogenase (ALDH) gene family. *Hum. Genomics* 2: 138-143.
- Marchitti, S.A., et al. 2008. Non-P450 aldehyde oxidizing enzymes: the aldehyde dehydrogenase superfamily. *Expert Opin. Drug Metab. Toxicol.* 4: 697-720.
- Hanna, M.C., et al. 2009. Interaction of the SPG21 protein ACP33/masparidin with the aldehyde dehydrogenase ALDH16A1. *Neurogenetics* 10: 217-228.
- Black, W.J., et al. 2009. Human aldehyde dehydrogenase genes: alternatively spliced transcriptional variants and their suggested nomenclature. *Pharmacogenet. Genomics* 19: 893-902.
- Um, H.N., et al. 2010. Molecular coevolution of kisspeptins and their receptors from fish to mammals. *Ann. N.Y. Acad. Sci.* 1200: 67-74.
- Assoum, M., et al. 2010. Rundataxin, a novel protein with RUN and diacylglycerol binding domains, is mutant in a new recessive ataxia. *Brain* 133: 2439-2447.
- Soderblom, C., et al. 2010. Targeted disruption of the Mast syndrome gene SPG21 in mice impairs hind limb function and alters axon branching in cultured cortical neurons. *Neurogenetics* 11: 369-378.

CHROMOSOMAL LOCATION

Genetic locus: ALDH16A1 (human) mapping to 19q13.33; Aldh16a1 (mouse) mapping to 7 B4.

SOURCE

ALDH16A1 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ALDH16A1 of human origin.

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.

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-167072 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LDH16A1 (T-14) is recommended for detection of ALDH16A1 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 other ALDH family members.

Suitable for use as control antibody for ALDH16A1 siRNA (h): sc-97458, ALDH16A1 siRNA (m): sc-140996, ALDH16A1 shRNA Plasmid (h): sc-97458-SH, ALDH16A1 shRNA Plasmid (m): sc-140996-SH, ALDH16A1 shRNA (h) Lentiviral Particles: sc-97458-V and ALDH16A1 shRNA (m) Lentiviral Particles: sc-140996-V.

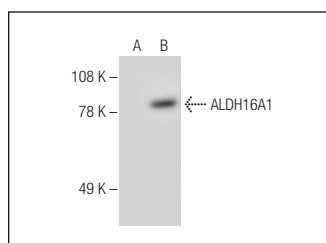
Molecular Weight of ALDH16A1: 85 kDa.

Positive Controls: ALDH16A (h): 293T Lysate: sc-113627 or ALDH16A (m): 293T Lysate: sc-126408.

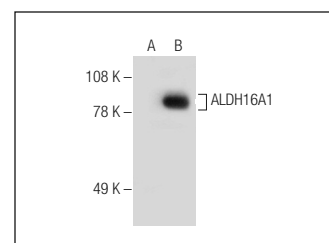
RECOMMENDED SECONDARY REAGENTS

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



ALDH16A1 (T-14): sc-167072. Western blot analysis of ALDH16A1 expression in non-transfected: sc-117752 (A) and human ALDH16A1 transfected: sc-113627 (B) 293T whole cell lysates.



ALDH16A1 (T-14): sc-167072. Western blot analysis of ALDH16A1 expression in non-transfected: sc-117752 (A) and mouse ALDH16A1 transfected: sc-126408 (B) 293T whole cell lysates.

RESEARCH USE

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