

ALDH16A1 (m): 293T Lysate: sc-126408

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 Maspardin, a protein linked to Mast syndrome. Encoded by a gene that maps to human chromosome 19q13.33, ALDH16A1 exists as two alternatively spliced isoforms and contains seventeen exons. ALDH16A1 is conserved in chimpanzee, canine, bovine, mouse, rat and zebrafish; however, a cysteine active site and glutamate residues are not conserved.

REFERENCES

1. Vasiliou, V. and Nebert, D.W. 2005. Analysis and update of the human aldehyde dehydrogenase (ALDH) gene family. *Hum. Genomics* 2: 138-143.
2. Marchitti, S.A., Brocker, C., Stagos, D. and Vasiliou, V. 2008. Non-P450 aldehyde oxidizing enzymes: the aldehyde dehydrogenase superfamily. *Expert Opin. Drug Metab. Toxicol.* 4: 697-720.
3. Hanna, M.C. and Blackstone, C. 2009. Interaction of the SPG21 protein ACP33/maspardin with the aldehyde dehydrogenase ALDH16A1. *Neurogenetics* 10: 217-228.
4. Black, W.J., Stagos, D., Marchitti, S.A., Nebert, D.W., Tipton, K.F., Bairoch, A. and Vasiliou, V. 2009. Human aldehyde dehydrogenase genes: alternatively spliced transcriptional variants and their suggested nomenclature. *Pharmacogenet. Genomics* 19: 893-902.
5. Um, H.N., Han, J.M., Hwang, J.I., Hong, S.I., Vaudry, H. and Seong, J.Y. 2010. Molecular coevolution of kisspeptins and their receptors from fish to mammals. *Ann. N.Y. Acad. Sci.* 1200: 67-74.
6. Assoum, M., Salih, M.A., Drouot, N., H'Mida-Ben Brahim, D., Lagier-Tourenne, C., Aldrees, A., Elmalik, S.A., Ahmed, T.S., Seidahmed, M.Z., Kabiraj, M.M. and Koenig, M. 2010. Rundataxin, a novel protein with RUN and diacylglycerol binding domains, is mutant in a new recessive ataxia. *Brain* 133: 2439-2447.
7. Soderblom, C., Stadler, J., Jupille, H., Blackstone, C., Shupliakov, O. and Hanna, M.C. 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 (mouse) mapping to 7 B4.

PRODUCT

ALDH16A1 (m): 293T Lysate represents a lysate of mouse ALDH16A1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

ALDH16A1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ALDH16A1 antibodies. Recommended use: 10-20 µl per lane.

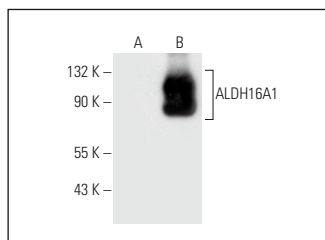
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ALDH16A1 (E-1): sc-398657 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ALDH16A1 expression in ALDH16A1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

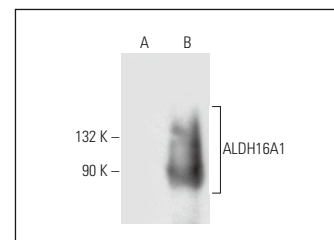
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



ALDH16A1 (E-1): sc-398657. Western blot analysis of ALDH16A1 expression in non-transfected: sc-117752 (A) and mouse ALDH16A1 transfected: sc-126408 (B) 293T whole cell lysates.



ALDH16A1 (C-5): sc-398693. 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.

PROTOCOLS

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