

# ALDH4A1 (m2): 293T Lysate: sc-124945

## BACKGROUND

Aldehyde dehydrogenases (ALDHs) mediate NADP<sup>+</sup>-dependent oxidation of aldehydes into acids during detoxification of alcohol-derived acetaldehyde, lipid peroxidation and metabolism of corticosteroids, biogenic amines and neurotransmitters. ALDH4A1 (aldehyde dehydrogenase 4 family member A1), also known as P5CD ( $\Delta^1$ -pyrroline-5-carboxylate dehydrogenase), P5CDh, P5CDhL, P5CDhS or ALDH4, is a major enzyme involved in the proline degradation pathway. Localizing to the mitochondrial matrix, ALDH4A1 catalyzes the conversion of  $\Delta^1$ -pyrroline-5-carboxylate (P5C) to glutamate. A mutation in the gene encoding ALDH4A1 results in HPII (hyperprolinemia type II), a disease characterized by an excess of P5C and proline that is associated with mental retardation and seizures.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Aldh4a1 (mouse) mapping to 4 D3.

## RESEARCH USE

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

## PRODUCT

ALDH4A1 (m2): 293T Lysate represents a lysate of mouse ALDH4A1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

ALDH4A1 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ALDH4A1 antibodies. Recommended use: 10-20 µl per lane.

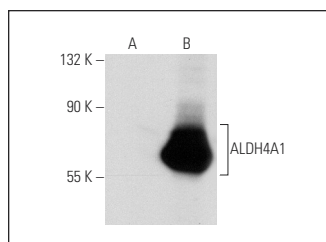
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ALDH4A1 (672): sc-100499 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ALDH4A1 expression in ALDH4A1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

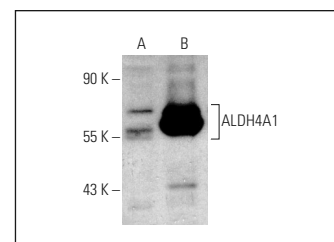
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



ALDH4A1 (672): sc-100499. Western blot analysis of ALDH4A1 expression in non-transfected: sc-117752 (A) and mouse ALDH4A1 transfected: sc-124945 (B) 293T whole cell lysates.



ALDH4A1 (672): sc-100499. Western blot analysis of ALDH4A1 expression in non-transfected: sc-117752 (A) and mouse ALDH4A1 transfected: sc-124945 (B) 293T whole cell lysates.

## 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.

## PROTOCOLS

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