

ADH (m2): 293T Lysate: sc-118253

BACKGROUND

The alcohol dehydrogenase family of proteins metabolize a wide variety of substrates, including ethanol, retinol, other aliphatic alcohols, hydroxysteroids and lipid peroxidation products. Class I alcohol dehydrogenase, which consists of several homo- and heterodimers of α , β and γ subunits, exhibits high activity for ethanol oxidation and plays a major role in ethanol catabolism. ADH catalyzes the reversible conversion of organic alcohols to ketones or aldehydes. The three genes that encode the α (ADH1A), β (ADH1B) and γ (ADH1C) subunits are tandemly organized on chromosome 4q22 as a gene cluster. The α form of ADH is monomeric and is predominantly expressed in fetal and infant livers. ADH activity decreases during gestation and demonstrates limited expression during adulthood, however, the genes encoding β and γ subunits are polymorphic and strongly expressed in adult livers. The physiologic function for ADH in the liver is the removal of ethanol in the intestinal tract.

REFERENCES

1. Smith, M., Hopkinson, D.A. and Harris, H. 1973. Studies on the subunit structure and molecular size of the human dehydrogenase isozymes determined by the different loci, ADH1, ADH2, and ADH3. *Ann. Hum. Genet.* 36: 401-414.
2. Smith, M., Duester, G., Bilanchone, V., Carlock, L. and Hatfield, W. 1984. Derivation of probes for molecular genetic analysis of human class I alcohol dehydrogenase (ADH), a polymorphic gene family on chromosome 4. *Am. J. Hum. Genet.* 36: 153S.
3. Tsukahara, M. and Yoshida, A. 1989. Chromosomal assignment of the alcohol dehydrogenase cluster locus to human chromosome 4q21-23 by *in situ* hybridization. *Genomics* 4: 218-220.
4. Yasunami, M., Kikuchi, I., Sarapata, D. and Yoshida, A. 1989. The organization of human class I alcohol dehydrogenase gene cluster. *Cytogenet. Cell Genet.* 51: 1113.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 103700. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Jelski, W., Chrostek, L., Laszewicz, W. and Szmitkowski, M. 2007. Alcohol dehydrogenase (ADH) isoenzyme activity in the sera of patients with *Helicobacter pylori* infection. *Dig. Dis. Sci.* 52: 1513-1516.

PRODUCT

ADH (m2): 293T Lysate represents a lysate of mouse ADH transfected 293T cells and is provided as 100 μ g protein in 200 μ l 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.

PROTOCOLS

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

APPLICATIONS

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

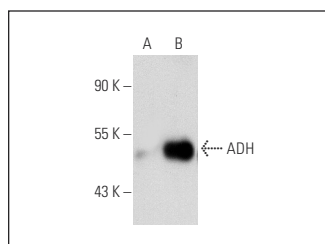
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ADH (G-7): sc-133207 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ADH expression in ADH 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-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.

DATA



ADH (G-7): sc-133207. Western blot analysis of ADH expression in non-transfected: sc-117752 (A) and mouse ADH transfected: sc-118253 (B) 293T whole cell lysates.

RESEARCH USE

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