

# ADH (1.BB.974): sc-70325

## 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, consisting of several homo- and heterodimers of  $\alpha$ ,  $\beta$  and  $\gamma$  subunits, exhibits high activity for ethanol oxidation and plays a major role in ethanol catabolism. Three genes encoding  $\alpha$  (ADH1A),  $\beta$  (ADH1B) and  $\gamma$  (ADH1C) subunits are tandemly organized on chromosome 4q22 as a gene cluster. The  $\alpha$  form of ADH is monomorphic and predominant in fetal and infant livers, becoming less active in gestation and only weakly active during adulthood. The genes encoding  $\beta$  and  $\gamma$  subunits, however, are polymorphic and strongly expressed in adult livers. With the coenzyme NAD, ADH catalyzes the reversible conversion of organic alcohols to ketones or aldehydes. The physiologic function for ADH in the liver is the removal of ethanol formed by microorganisms in the intestinal tract.

## REFERENCES

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- 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.
- 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.
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- Jelski, W., Chrostek, L., Laszewicz, W. and Szmikowski, M. 2007. Alcohol dehydrogenase (ADH) isoenzyme activity in the sera of patients with *Helicobacter pylori* infection. *Dig. Dis. Sci.* 52: 1513-1516.

## SOURCE

ADH (1.BB.974) is a mouse monoclonal antibody raised against purified ADH from human liver.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

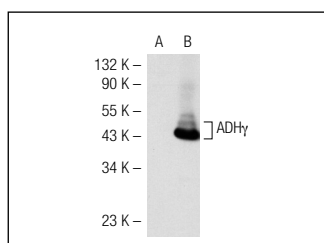
ADH (1.BB.974) is recommended for detection of ADH $\alpha$ , ADH $\beta$  and ADH $\gamma$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of ADH: 46 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker<sup>™</sup> compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



ADH (1.BB.974): sc-70325. Western blot analysis of ADH $\gamma$  expression in non-transfected: sc-117752 (A) and human ADH $\gamma$  transfected: sc-111481 (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](http://www.scbt.com) or our catalog for detailed protocols and support products.