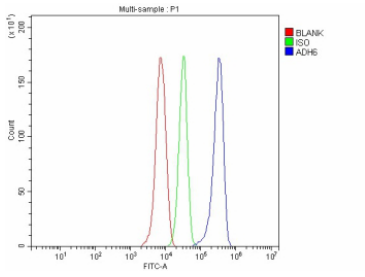
ADH6 Antibody / Alcohol dehydrogenase 6 (FY12747)

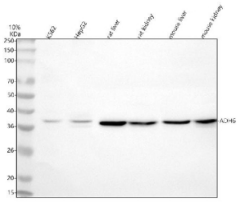
Catalog No.	Formulation	Size
FY12747	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P28332
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This ADH6 antibody is available for research use only.



Flow Cytometry analysis of HepG2 cells using anti-ADH6 antibody. Overlay histogram showing HepG2 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ADH6 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of ADH6 using anti-ADH6 antibody. Lane 1: human K562 whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: rat liver tissue lysates, Lane 4: rat kidney tissue lysates, Lane 5: mouse liver tissue lysates, Lane 6: mouse kidney tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ADH6 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for ADH6 at approximately 39 kDa. The expected molecular weight of ADH6 is ~39 kDa.

Description

ADH6 antibody detects Alcohol dehydrogenase class V (also known as ADH6), a zinc-dependent enzyme that catalyzes the oxidation of alcohols to aldehydes as part of ethanol and retinoid metabolism. Encoded by the ADH6 gene on chromosome 4q23, this enzyme belongs to the alcohol dehydrogenase family of oxidoreductases that use NAD+ as a cofactor. ADH6 is mainly expressed in liver tissue and contributes to the metabolism of short-chain alcohols and other substrates, complementing the activities of ADH1 and ADH4 isoenzymes.

Structurally, ADH6 is a homodimer of approximately 40 kilodalton subunits, each containing a zinc-binding catalytic domain. The enzyme exhibits broad substrate specificity, oxidizing both ethanol and retinol intermediates. While its catalytic efficiency toward ethanol is lower than ADH1A and ADH1B, ADH6 plays a significant role in the oxidation of aromatic and aliphatic alcohols, making it important for detoxification and vitamin A metabolism. Genetic variations in ADH6 influence alcohol metabolism rates and susceptibility to alcohol-related diseases.

The ADH6 antibody is used in enzymology, metabolism, and toxicology research to study alcohol oxidation and hepatic metabolism. Western blot analysis identifies a 40 kilodalton band corresponding to ADH6, while immunohistochemistry shows strong cytoplasmic staining in hepatocytes. This antibody supports investigation into liver enzyme expression profiles, ethanol metabolism, and the biochemical pathways linking alcohol consumption to liver injury.

Beyond hepatic metabolism, ADH6 participates in retinoid oxidation, converting retinol to retinal, a precursor of retinoic acid involved in gene regulation and differentiation. Dysregulation of ADH6 activity may impact vitamin A homeostasis and oxidative stress responses. NSJ Bioreagents provides the ADH6 antibody validated for its applications ensuring reliable detection of Alcohol dehydrogenase class V in metabolic and toxicological studies.

Application Notes

Optimal dilution of the ADH6 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ADH6 recombinant protein (Position: E50-K367) was used as the immunogen for the ADH6 antibody.

Storage

After reconstitution, the ADH6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Copyright © NSJ Bioreagents. All rights reserved.