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Anti-ADH5 Antibody
Catalog # ABO12787

Specification

Anti-ADH5 Antibody - Product Information

Application	**WB**
Primary Accession	P11766
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Alcohol dehydrogenase class-3(ADH5) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-ADH5 Antibody - Additional Information

Gene ID 128

Other Names
Alcohol dehydrogenase class-3, 1.1.1.1, Alcohol dehydrogenase 5, Alcohol dehydrogenase class chi chain, Alcohol dehydrogenase class-III, Glutathione-dependent formaldehyde dehydrogenase, FALDH, FDH, GSH-FDH, 1.1.1.-, S-(hydroxymethyl)glutathione dehydrogenase, 1.1.1.284, ADH5 (HGNC:253), ADHX, FDH

Calculated MW
39724 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cytoplasm.

Protein Name
Alcohol dehydrogenase class-3

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E. coli-derived human ADH5 recombinant protein (Position: K212-I374). Human ADH5 shares 90.2% and 92% amino acid (aa) sequence identity with mouse and rat ADH5, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins.

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-ADH5 Antibody - Protein Information

Name ADH5 (HGNC:253)

Synonyms ADHX, FDH

Function
Catalyzes the oxidation of long-chain primary alcohols and the oxidation of S-(hydroxymethyl) glutathione (PubMed:8460164). Also oxidizes long chain omega-hydroxy fatty acids, such as 20-HETE, producing both the intermediate aldehyde, 20-oxoarachidonate and the end product, a dicarboxylic acid, (5Z,8Z,11Z,14Z)-eicosatetraenedioate (PubMed:16081420). Class-III ADH is remarkably ineffective in oxidizing ethanol (PubMed:8460164). Required for clearance of cellular formaldehyde, a cytotoxic and carcinogenic metabolite that induces DNA damage (PubMed:33355142). Also acts as a S-nitroso-glutathione reductase by catalyzing the NADH-dependent reduction of S- nitrosoglutathione, thereby regulating protein S-nitrosylation (By similarity).

Cellular Location
Cytoplasm.

Anti-ADH5 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-ADH5 Antibody - Images

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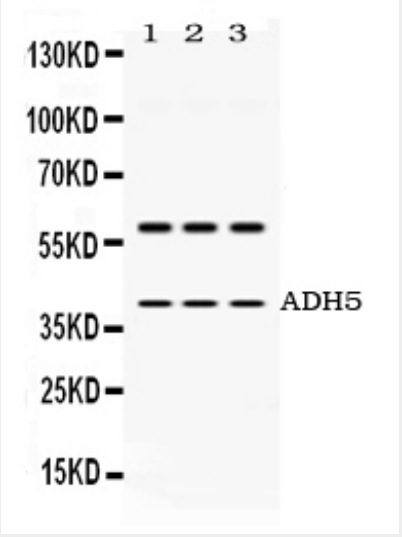

Western blot analysis of ADH5 expression in rat brain extract (lane 1), mouse brain extract (lane 2) and HEPG2 whole cell lysates (lane 3). ADH5 at 40KD was detected using rabbit anti- ADH5 Antigen Affinity purified polyclonal antibody (Catalog # ABO12787) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

Anti-ADH5 Antibody - Background

Alcohol dehydrogenase class-3 is an enzyme that in humans is encoded by the ADH5 gene. This gene encodes a member of the alcohol dehydrogenase family. Members of this family metabolize a wide variety of substrates, including ethanol, retinol, other aliphatic alcohols, hydroxysteroids, and lipid peroxidation products. The encoded protein forms a homodimer. It has virtually no activity for ethanol oxidation, but exhibits high activity for oxidation of long-chain primary alcohols and for oxidation of S-hydroxymethyl-glutathione, a spontaneous adduct between formaldehyde and glutathione. This enzyme is an important component of cellular metabolism for the elimination of formaldehyde, a potent irritant and sensitizing agent that causes lacrymation, rhinitis, pharyngitis, and contact dermatitis. The human genome contains several non-transcribed pseudogenes related to this gene.