

**Goat Anti-ADH5 Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1029a

### Specification

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#### Goat Anti-ADH5 Antibody - Product Information

Application	WB
Primary Accession	<a href="#">P11766</a>
Other Accession	<a href="#">NP_000662</a> , <a href="#">128</a> , <a href="#">11532 (mouse)</a>
Reactivity	Human, Mouse, Rat
Predicted	Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	39724

#### Goat 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](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=253)), ADHX, FDH

##### Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

##### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

##### Precautions

Goat Anti-ADH5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### Goat 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:<a href="http://www.uniprot.org/citations/8460164" target="\_blank">8460164</a>). 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:<a href="http://www.uniprot.org/citations/16081420" target="\_blank">16081420</a>). Class-III ADH is remarkably ineffective in oxidizing ethanol (PubMed:<a href="http://www.uniprot.org/citations/8460164" target="\_blank">8460164</a>). Required for clearance of cellular formaldehyde, a cytotoxic and carcinogenic metabolite that induces DNA damage (PubMed:<a href="http://www.uniprot.org/citations/33355142" target="\_blank">33355142</a>). 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.

#### Goat 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 Cytometry](#)
- [Cell Culture](#)

#### Goat Anti-ADH5 Antibody - Images



AF1029a (0.5 µg/ml) staining of Human Testis lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

#### Goat Anti-ADH5 Antibody - Background

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.

### **Goat Anti-ADH5 Antibody - References**

- An approach based on a genome-wide association study reveals candidate loci for narcolepsy. Shimada M, et al. Hum Genet, 2010 Oct. PMID 20677014.
- Maternal genes and facial clefts in offspring: a comprehensive search for genetic associations in two population-based cleft studies from Scandinavia. Jugessur A, et al. PLoS One, 2010 Jul 9. PMID 20634891.
- S-nitrosylation from GSNOR deficiency impairs DNA repair and promotes hepatocarcinogenesis. Wei W, et al. Sci Transl Med, 2010 Feb 17. PMID 20371487.
- GSNO reductase and beta2-adrenergic receptor gene-gene interaction: bronchodilator responsiveness to albuterol. Choudhry S, et al. Pharmacogenet Genomics, 2010 Jun. PMID 20335826.
- Associations between ADH gene variants and alcohol phenotypes in Dutch adults. van Beek JH, et al. Twin Res Hum Genet, 2010 Feb. PMID 20158305.