

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

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**Goat Anti-ADH5 Antibody - Product Information**

Application	WB, IHC, E
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 ([http://www.genenames.org/cgi-bin/gene\\_symbol\\_report?hgnc\\_id=253](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=253))>HGNC:253</a>), ADHX, FDH

**Dilution**

WB~~1:1000  
IHC~~1:100~500  
E~~N/A

**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.