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

Specification

Goat Anti-ADH5 Antibody - Product Information

Application	**WB**
Primary Accession	P11766
Other Accession	NP_000662, 128, 11532 (mouse)
Reactivity	**Human, Mouse, Rat**
Predicted	**Pig, Dog, Cow**
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), 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: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 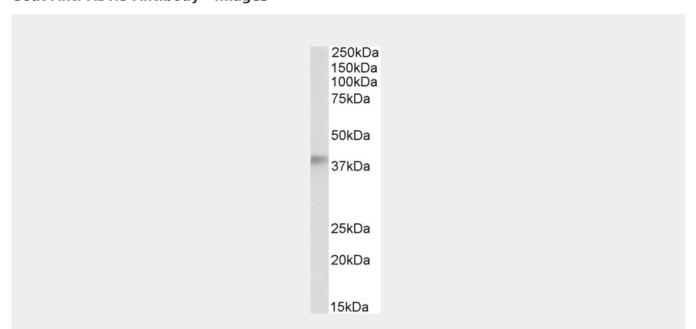and carcinogenic metabolite that induces DNA damage (PubMed:33355142).

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 Cytomety](#)
- [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.