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ADH5 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP8562c

Specification

ADH5 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P11766

ADH5 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 128

Other Names
Alcohol dehydrogenase class-3, Alcohol dehydrogenase 5, Alcohol dehydrogenase class chi chain, Alcohol dehydrogenase class-III, Glutathione-dependent formaldehyde dehydrogenase, FALDH, FDH, GSH-FDH, 111-, S-(hydroxymethyl)glutathione dehydrogenase, ADH5 (HGNC:253), ADHX, FDH

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8562c was selected from the Center region of human ADH5. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ADH5 Antibody (Center) Blocking Peptide - 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.

ADH5 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

ADH5 Antibody (Center) Blocking Peptide - Images

ADH5 Antibody (Center) Blocking Peptide - Background

ADH5 is 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. This 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.

ADH5 Antibody (Center) Blocking Peptide - References

Martins-de-Souza,D., et.al., Eur Arch Psychiatry Clin Neurosci 259 (3), 151-163 (2009)Iborra,F.J., et.al., J. Histochem. Cytochem. 40 (12), 1865-1878 (1992)