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Anti-ADH5 Antibody

Catalog # ABO12787

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.

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
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm.
Source	Eukaryota
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.

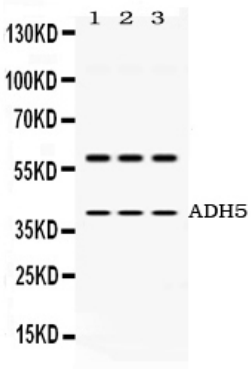
Protein Information

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.

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.

Images



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 .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.