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AKR1C4 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP16366a

Specification

AKR1C4 Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	P17516
Other Accession	NP_001809.2
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**11-39**

AKR1C4 Antibody (N-term) - Additional Information

Gene ID 1109

Other Names
Aldo-keto reductase family 1 member C4, 111-, 3-alpha-HSD1, 3-alpha-hydroxysteroid dehydrogenase type I, Chlordecone reductase, CDR, Dihydrodiol dehydrogenase 4, DD-4, DD4, HAKRA, AKR1C4, CHDR

Target/Specificity
This AKR1C4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 11-39 amino acids from the N-terminal region of human AKR1C4.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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

Precautions
AKR1C4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

AKR1C4 Antibody (N-term) - Protein Information

Name AKR1C4

Synonyms CHDR

Function Cytosolic aldo-keto reductase that catalyzes the NADH and NADPH-dependent reduction of ketosteroids to hydroxysteroids. Liver specific enzyme that acts as an NAD(P)(H)-dependent 3-, 17- and 20- ketosteroid reductase on the steroid nucleus and side chain (PubMed:10634139, PubMed:10998348, PubMed:11158055, PubMed:14672942, PubMed:1530633, PubMed:19218247, PubMed:7650035). Displays the ability to catalyze both oxidation and reduction in vitro, but most probably acts as a reductase in vivo since the oxidase activity measured in vitro is inhibited by physiological concentration of NADPH (PubMed:14672942). Acts preferentially as a 3-alpha-hydroxysteroid dehydrogenase (HSD) with a subsidiary 3-beta-HSD activity (PubMed:14672942). Catalyzes efficiently the transformation of the potent androgen 5-alpha-dihydrotestosterone (5alpha-DHT or 17beta- hydroxy-5alpha-androstan-3-one) into the less active form, 5-alpha- androstan-3-alpha,17-beta-diol (3-alpha-diol) (PubMed:10998348, PubMed:11158055, PubMed:14672942). Catalyzes the reduction of estrone into 17beta-estradiol but with low efficiency (PubMed:14672942). Metabolizes a broad spectrum of natural and synthetic therapeutic steroid and plays an important role in metabolism of androgens, estrogens, progestereone and conjugated steroids (PubMed:10998348, PubMed:14672942, PubMed:19218247). Catalyzes the biotransformation of the pesticide chlordecone (kepone) to its corresponding alcohol leading to increased biliary excretion of the pesticide and concomitant reduction of its neurotoxicity since bile is the major excretory route (PubMed:2427522).

Cellular Location
Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q04828}

Tissue Location
Liver specific.

AKR1C4 Antibody (N-term) - 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

AKR1C4 Antibody (N-term) - Images

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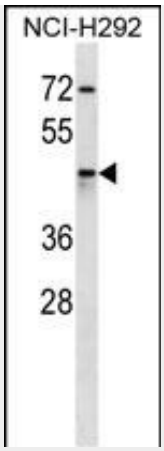

AKR1C4 Antibody (N-term) (Cat. #AP16366a) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the AKR1C4 antibody detected the AKR1C4 protein (arrow).

AKR1C4 Antibody (N-term) - Background

AKR1C4 is a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. These enzymes catalyze the conversion of aldehydes and ketones to their corresponding alcohols by utilizing NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme catalyzes the bioreduction of chlordecone, a toxic organochlorine pesticide, to chlordecone alcohol in liver. This gene shares high sequence identity with three other gene members and is clustered with those three genes at chromosome 10p15-p14.

AKR1C4 Antibody (N-term) - References

Joslyn, G., et al. Alcohol. Clin. Exp. Res. 34(5):800-812(2010)
Guey, L.T., et al. Eur. Urol. 57(2):283-292(2010)
Li, J., et al. Breast Cancer Res. 12 (2), R19 (2010) :
Hosgood, H.D. III, et al. Respir Med 103(12):1866-1870(2009)
Shen, M., et al. Environ. Mol. Mutagen. 50(4):285-290(2009)