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AKR1C4 / Chlordecone Reductase Antibody (clone 2C11)

Mouse Monoclonal Antibody
Catalog # ALS14034

Specification

AKR1C4 / Chlordecone Reductase Antibody (clone 2C11) - Product Information

Application	**WB, IF, IHC**
Primary Accession	P17516
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**37kDa KDa**

AKR1C4 / Chlordecone Reductase Antibody (clone 2C11) - Additional Information

Gene ID 1109

Other Names
Aldo-keto reductase family 1 member C4, 1.1.1.-, 3-alpha-HSD1, 3-alpha-hydroxysteroid dehydrogenase type I, 1.1.1.357, Chlordecone reductase, CDR, 1.1.1.225, Dihydrodiol dehydrogenase 4, DD-4, DD4, HAKRA, AKR1C4, CHDR

Target/Specificity
Human AKR1C4

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
AKR1C4 / Chlordecone Reductase Antibody (clone 2C11) is for research use only and not for use in diagnostic or therapeutic procedures.

AKR1C4 / Chlordecone Reductase Antibody (clone 2C11) - 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:14672942, PubMed:10998348, PubMed:7650035, PubMed:1530633, PubMed:11158055, PubMed:10634139, PubMed:<a

href="http://www.uniprot.org/citations/19218247" target="_blank">19218247). 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:11158055, PubMed:10998348, 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 / Chlordecone Reductase Antibody (clone 2C11) - 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 / Chlordecone Reductase Antibody (clone 2C11) - Images

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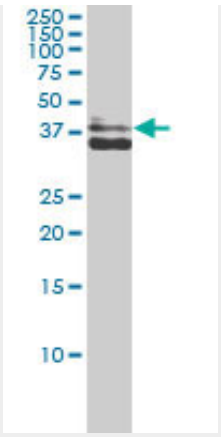
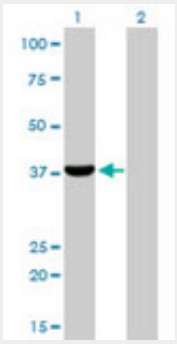
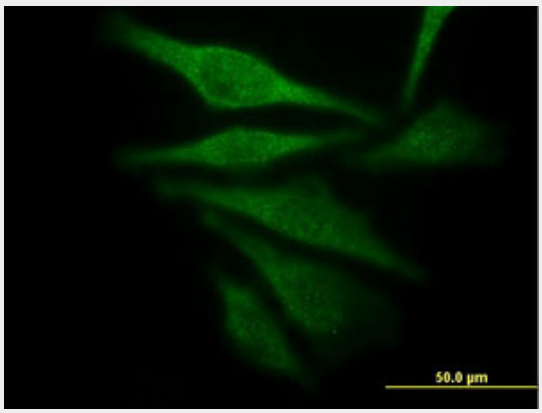


AKR1C4 monoclonal antibody (M01), clone 2C11 Western blot of AKR1C4 expression in MCF-7.



Western blot of AKR1C4 expression in transfected 293T cell line by AKR1C4 monoclonal antibody...



Immunofluorescence of monoclonal antibody to AKR1C4 on HepG2 cell. [antibody concentration 15 ug/ml]

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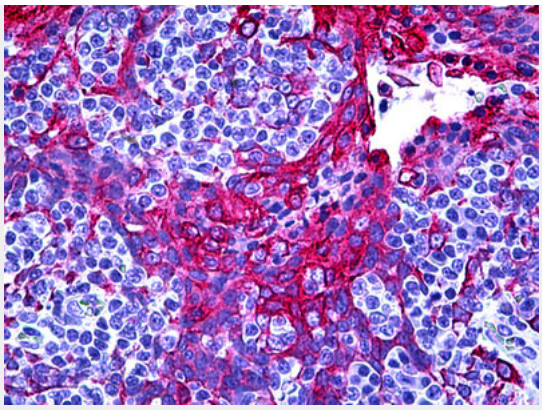

Anti-AKR1C4 antibody IHC of human tonsil, squamous epithelium.

AKR1C4 / Chlordecone Reductase Antibody (clone 2C11) - Background

Catalyzes the transformation of the potent androgen dihydrotestosterone (DHT) into the less active form, 5-alpha- androstan-3-alpha,17-beta-diol (3-alpha-diol). Also has some 20-alpha-hydroxysteroid dehydrogenase activity. The biotransformation of the pesticide chlordecone (kepone) to its corresponding alcohol leads to increased biliary excretion of the pesticide and concomitant reduction of its neurotoxicity since bile is the major excretory route.

AKR1C4 / Chlordecone Reductase Antibody (clone 2C11) - References

Qin K.-N.,et al.J. Steroid Biochem. Mol. Biol. 46:673-679(1993).
Khanna M.,et al.J. Biol. Chem. 270:20162-20168(1995).
Khanna M.,et al.J. Steroid Biochem. Mol. Biol. 53:41-46(1995).
Kume T.,et al.Pharmacogenetics 9:763-771(1999).
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