

# Anti-AKR1C1/C2 Picoband Antibody

Catalog # ABO11654

### Specification

# Anti-AKR1C1/C2 Picoband Antibody - Product Information

ApplicationWBPrimary AccessionP52895HostRabbitReactivityHuman, RatClonalityPolyclonalFormatLyophilizedDescriptionRabbit IgG polyclonal antibody for Aldo-keto reductase family 1 member C1/C2(AKR1C1/C2)detection. Tested with WB in Human;Rat.

**Reconstitution** Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

## Anti-AKR1C1/C2 Picoband Antibody - Additional Information

Gene ID 1646

**Other Names** 

Aldo-keto reductase family 1 member C2, 1.-.-, 3-alpha-HSD3, Chlordecone reductase homolog HAKRD, Dihydrodiol dehydrogenase 2, DD-2, DD2, Dihydrodiol dehydrogenase/bile acid-binding protein, DD/BABP, Trans-1, 2-dihydrobenzene-1, 2-diol dehydrogenase, 1.3.1.20, Type III 3-alpha-hydroxysteroid dehydrogenase, 1.1.1.357, AKR1C2, DDH2

Calculated MW 36735 MW KDa

**Application Details** Western blot, 0.1-0.5 µg/ml, Human, Rat<br>

Subcellular Localization Cytoplasm .

**Tissue Specificity** Expressed in fetal testes. Expressed in fetal and adult adrenal glands. .

Protein Name Aldo-keto reductase family 1 member C1/C2

**Contents** Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen

E. coli-derived human AKR1C1/C2 recombinant protein (Position: M1-K123).



**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.

# Anti-AKR1C1/C2 Picoband Antibody - Protein Information

Name AKR1C2

Synonyms DDH2

Function

Cytosolic aldo-keto reductase that catalyzes the NADH and NADPH-dependent reduction of ketosteroids to hydroxysteroids (PubMed:<a href="http://www.uniprot.org/citations/19218247" target=" blank">19218247</a>). Most probably acts as a reductase in vivo since the oxidase activity measured in vitro is inhibited by physiological concentrations of NADPH (PubMed:<a href="http://www.uniprot.org/citations/14672942" target=" blank">14672942</a>). Displays a broad positional specificity acting on positions 3, 17 and 20 of steroids and regulates the metabolism of hormones like estrogens and androgens (PubMed: <a href="http://www.uniprot.org/citations/10998348" target=" blank">10998348</a>). Works in concert with the 5-alpha/5-beta-steroid reductases to convert steroid hormones into the 3-alpha/5-alpha and 3- alpha/5-beta-tetrahydrosteroids. Catalyzes the inactivation of the most potent androgen 5-alpha-dihydrotestosterone (5-alpha-DHT) to 5-alphaandrostane-3-alpha,17-beta-diol (3-alpha-diol) (PubMed: <a href="http://www.uniprot.org/citations/15929998" target=" blank">15929998</a>, PubMed:<a href="http://www.uniprot.org/citations/17034817" target=" blank">17034817</a>, PubMed:<a href="http://www.uniprot.org/citations/17442338" target=" blank">17442338</a>, PubMed:<a href="http://www.uniprot.org/citations/8573067" target="\_blank">8573067</a>). Also specifically able to produce 17beta-hydroxy-5alpha-androstan-3-one/5alphaDHT (PubMed:<a href="http://www.uniprot.org/citations/10998348" target="\_blank">10998348</a>). May also reduce conjugated steroids such as 5alpha- dihydrotestosterone sulfate (PubMed: <a href="http://www.uniprot.org/citations/19218247" target=" blank">19218247</a>). Displays affinity for bile acids (PubMed:<a href="http://www.uniprot.org/citations/8486699" target=" blank">8486699</a>).

**Cellular Location** Cytoplasm, cytosol.

**Tissue Location** Expressed in fetal testes. Expressed in fetal and adult adrenal glands.

### Anti-AKR1C1/C2 Picoband Antibody - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides



- <u>Dot Blot</u>
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Anti-AKR1C1/C2 Picoband Antibody - Images



Western blot analysis of AKR1C1/C2 expression in rat liver extract (lane 1) and HELA whole cell lysates (lane 2). AKR1C1/C2 at 37KD was detected using rabbit anti- AKR1C1/C2 Antigen Affinity purified polyclonal antibody (Catalog # ABO11654) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

# Anti-AKR1C1/C2 Picoband Antibody - Background

This gene encodes 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 using NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme binds bile acid with high affinity, and shows minimal 3-alpha-hydroxysteroid dehydrogenase activity. And this gene shares high sequence identity with three other gene members and is clustered with those three genes at chromosome 10p15-p14. Three transcript variants encoding two different isoforms have been found for this gene.