

**AKR1C2 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP12246B****Specification**

---

**AKR1C2 Antibody (C-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">P52895</a>
Other Accession	<a href="#">O95JH7</a> , <a href="#">Q04828</a> , <a href="#">NP_995317.1</a>
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	36735
Antigen Region	296-323

**AKR1C2 Antibody (C-term) - 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, Type III 3-alpha-hydroxysteroid dehydrogenase, AKR1C2, DDH2

**Target/Specificity**

This AKR1C2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 296-323 amino acids from the C-terminal region of human AKR1C2.

**Dilution**

WB~~1:2000

IHC-P~~1:10~50

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**

AKR1C2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**AKR1C2 Antibody (C-term) - Protein Information**

**Name** AKR1C2

**Synonyms** DDH2

**Function** Cytosolic aldo-keto reductase that catalyzes the NADH and NADPH-dependent reduction of ketosteroids to hydroxysteroids (PubMed:[19218247](#)). Most probably acts as a reductase in vivo since the oxidase activity measured in vitro is inhibited by physiological concentrations of NADPH (PubMed:[14672942](#)). 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:[10998348](#)). 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-alpha-androstane-3-alpha,17-beta-diol (3-alpha-diol) (PubMed:[15929998](#), PubMed:[17034817](#), PubMed:[17442338](#), PubMed:[8573067](#)). Also specifically able to produce 17beta-hydroxy-5alpha-androstan-3-one/5alphaDHT (PubMed:[10998348](#)). May also reduce conjugated steroids such as 5alpha- dihydrotestosterone sulfate (PubMed:[19218247](#)). Displays affinity for bile acids (PubMed:[8486699](#)).

**Cellular Location**

Cytoplasm, cytosol.

**Tissue Location**

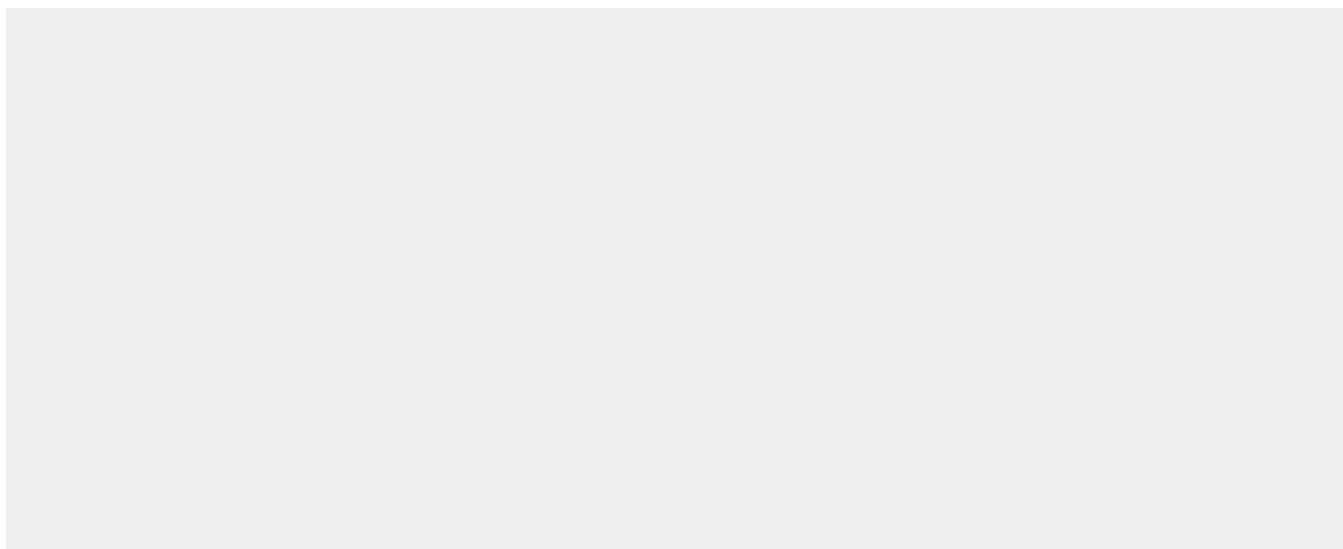
Expressed in fetal testes. Expressed in fetal and adult adrenal glands.

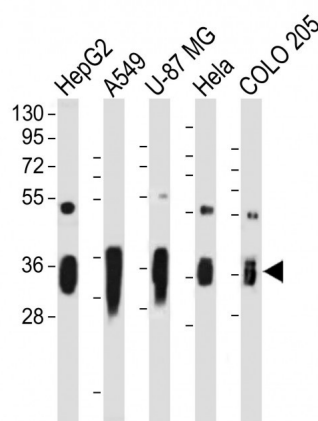
**AKR1C2 Antibody (C-term) - Protocols**

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

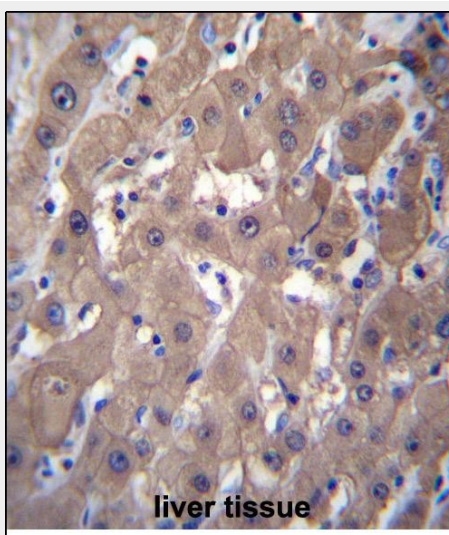
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**AKR1C2 Antibody (C-term) - Images**





All lanes : Anti-AKR1C2 Antibody (C-term) at 1:2000 dilution Lane 1: HepG2 whole cell lysate Lane 2: A549 whole cell lysate Lane 3: U-87 MG whole cell lysate Lane 4: Hela whole cell lysate Lane 5: COLO 205 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 37 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AKR1C2 Antibody (C-term) (Cat. #AP12246b) immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of AKR1C2 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

### **AKR1C2 Antibody (C-term) - 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. This gene shares high sequence identity with three other gene members and is clustered with those three genes at chromosome 10p15-p14.

**AKR1C2 Antibody (C-term) - References**

Setlur, S.R., et al. Cancer Epidemiol. Biomarkers Prev. 19(1):229-239(2010)  
Wang, X., et al. PLoS ONE 5 (8), E11934 (2010) :  
Reding, K.W., et al. Am. J. Epidemiol. 170(10):1241-1249(2009)  
Cogliati, C., et al. FEBS J. 276(20):6011-6023(2009)  
Davies, N.J., et al. Cancer Res. 69(11):4769-4775(2009)

**AKR1C2 Antibody (C-term) - Citations**

- [Effects of Curcumin Combined With the 5-alpha Reductase Inhibitor Dutasteride on LNCaP Prostate Cancer Cells](#)
- [Modulation of AKR1C2 by curcumin decreases testosterone production in prostate cancer.](#)