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AKR1C2 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP53284

Product Information

Application	WB
Primary Accession	P52895
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36735

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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human AKR1C2. The exact sequence is proprietary.
Dilution	WB~~ 1:1000
Format	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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.

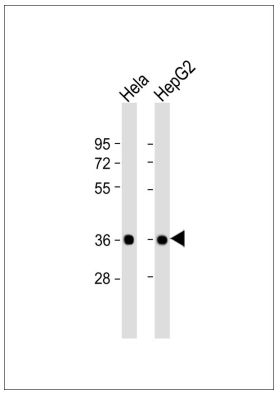
Background

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). Has a high bile-binding ability.

References

Qin K.-N.,et al.J. Steroid Biochem. Mol. Biol. 46:673-679(1993).
Ciaccio P.J.,et al.Biochim. Biophys. Acta 1186:129-132(1994).
Qin K.-N.,et al.Gene 149:357-361(1994).
Dufort I.,et al.Biochem. Biophys. Res. Commun. 228:474-479(1996).
Shiraishi H.,et al.Biochem. J. 334:399-405(1998).

Images



All lanes : Anti-AKR1C2 Antibody at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: HepG2 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.