

**AKR1C4 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP16366a****Specification**

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**AKR1C4 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [P17516](#)**AKR1C4 Antibody (N-term) Blocking Peptide - 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

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**AKR1C4 Antibody (N-term) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/14672942" target="\_blank">14672942</a>, PubMed:<a href="http://www.uniprot.org/citations/10998348" target="\_blank">10998348</a>, PubMed:<a href="http://www.uniprot.org/citations/7650035" target="\_blank">7650035</a>, PubMed:<a href="http://www.uniprot.org/citations/1530633" target="\_blank">1530633</a>, PubMed:<a href="http://www.uniprot.org/citations/11158055" target="\_blank">11158055</a>, PubMed:<a href="http://www.uniprot.org/citations/10634139" target="\_blank">10634139</a>, PubMed:<a href="http://www.uniprot.org/citations/19218247" target="\_blank">19218247</a>). 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:<a href="http://www.uniprot.org/citations/14672942" target="\_blank">14672942</a>). Acts preferentially as a 3-alpha-hydroxysteroid dehydrogenase

(HSD) with a subsidiary 3-beta-HSD activity (PubMed:<a href="http://www.uniprot.org/citations/14672942" target="\_blank">14672942</a>). 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:<a href="http://www.uniprot.org/citations/11158055" target="\_blank">11158055</a>, PubMed:<a href="http://www.uniprot.org/citations/10998348" target="\_blank">10998348</a>, PubMed:<a href="http://www.uniprot.org/citations/14672942" target="\_blank">14672942</a>). Catalyzes the reduction of estrone into 17beta-estradiol but with low efficiency (PubMed:<a href="http://www.uniprot.org/citations/14672942" target="\_blank">14672942</a>). Metabolizes a broad spectrum of natural and synthetic therapeutic steroid and plays an important role in metabolism of androgens, estrogens, progesterone and conjugated steroids (PubMed:<a href="http://www.uniprot.org/citations/10998348" target="\_blank">10998348</a>, PubMed:<a href="http://www.uniprot.org/citations/14672942" target="\_blank">14672942</a>, PubMed:<a href="http://www.uniprot.org/citations/19218247" target="\_blank">19218247</a>). Catalyzes the biotransformation of the pesticide chlordane (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:<a href="http://www.uniprot.org/citations/2427522" target="\_blank">2427522</a>).

#### Cellular Location

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

#### Tissue Location

Liver specific.

### AKR1C4 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

### AKR1C4 Antibody (N-term) Blocking Peptide - Images

### AKR1C4 Antibody (N-term) Blocking Peptide - Background

AKR1C4 is a member of the aldo/keto reductases 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 chlordane, a toxic organochlorine pesticide, to chlordane 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) Blocking Peptide - 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)