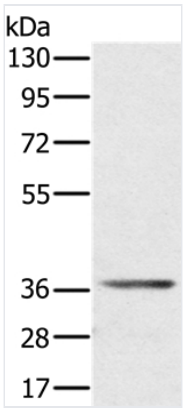
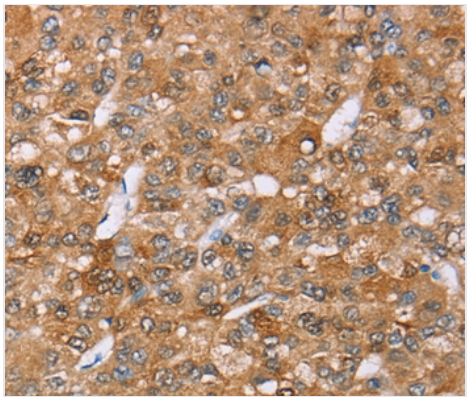
AKR1C4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	AKR1C4, Polyclonal Antibody
Full Product Name	AKR1C4 Antibody
Product Gene Name	anti-AKR1C4 antibody
Product Synonym Names	C11; CDR; DD4; CHDR; DD-4; HAKRA; 3-alpha-HSD
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Rabbit IgG in pH7.3 PBS, 0.05% NaN3, 50% Glycerol.
Purity/Purification	Antigen affinity purification.
Concentration	1.5 mg/ml (lot specific)
Specificity	The antibody detects endogenous levels of total AKR1C4 protein.
Preparation and Storage	Store at -20 degree C
Molecular Weight	37,067 Da
OMIM	600451
3D Structure	ModBase 3D Structure for P17516
Immunogen Type	Recombinant Protein
Immunogen Description	Full length fusion protein
Target Name	AKR1C4
Product Categories/Family for anti-AKR1C4 antibody	Total protein Ab
Applications Tested/Suitable for anti-AKR1C4 antibody	Western Blot (WB), Immunohistochemistry (IHC)
Application Notes for anti-AKR1C4 antibody	Western blotting: 1:200-1:1000 Immunohistochemistry: 1:25-1:100
Related Product Information for anti-AKR1C4 antibody	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 by utilizing NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme catalyzes the bioreduction of chlordecone, a toxic organochlorine pesticide, to chlordecone alcohol in liver.
Other Notes	Small volumes of anti-AKR1C4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for AKR1C4 purchase	MBS9410284 is an antibody targeting AKR1C4. Also known as AKR1C4 Antibody. Reactive in Human, Mouse. Host: Rabbit.



Testing Data of anti-AKR1C4 antibody
Gel: 8%SDS-PAGE Lysates (from left to right): Mouse liver tissue Amount of lysate: 40ug per lane Primary antibody: 1/400 dilution Secondary antibody dilution: 1/8000 Exposure time: 5 seconds



Immunohistochemistry (IHC) of anti-AKR1C4 antibody
Immunohistochemical analysis of paraffin-embedded Human liver cancer tissue using at dilution 1/30.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for AKR1C4. It may not necessarily be applicable to this product.

NCBI GI #	325652083
NCBI GeneID	1109
NCBI Accession #	NP_001809.3
UniProt Primary Accession #	P17516
UniProt Secondary Accession #	Q5T6A3; Q8WW84; Q9NS54
UniProt Related Accession #	P17516; AAB47003
GenBank Nucleotide #	NM_001818.3
NCBI Official Full Name	aldo-keto reductase family 1 member C4
NCBI Official Synonym Full Names	aldo-keto reductase family 1, member C4
NCBI Official Symbol	AKR1C4
NCBI Official Synonym Symbols	C11; CDR; DD4; CHDR; DD-4; HAKRA; 3-alpha-HSD
UniProt Protein Name	Aldo-keto reductase family 1 member C4
UniProt Synonym Protein Names	3-alpha-HSD1; 3-alpha-hydroxysteroid dehydrogenase type I (EC:1.1.1.357); Chlordecone reductase (EC:1.1.1.225); CDR; Dihydrodiol dehydrogenase 4; DD-4; DD4; HAKRA
Protein Family	Aldo-keto reductase family
UniProt Gene Name	AKR1C4
UniProt Synonym Gene Names	CHDR; CDR; DD-4; DD4
UniProt Entry Name	AK1C4_HUMAN
NCBI Protein Information	aldo-keto reductase family 1 member C4
NCBI Summary for AKR1C4	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 by utilizing NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme catalyzes the bioreduction of chlordecone, a toxic organochlorine pesticide, to chlordecone 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. [provided by RefSeq, Jul 2008]

UniProt Comments for AKR1C4	AKR1C4: 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. Defects in AKR1C4 are a cause of 46,XY sex reversal type 8 (SRXY8). A disorder of sex development. Affected individuals have a 46,XY karyotype but present as phenotypically normal females. AKR1C4 mutations may act as modifier of disease severity in SRXY8 patients. A splicing mutation resulting in loss of exon 2 has been found in affected individuals also carrying mutation Val-79 in AKR1C2 (PubMed:21802064). Belongs to the aldo/keto reductase family. Protein type: Xenobiotic Metabolism - metabolism by cytochrome P450; Oxidoreductase; Lipid Metabolism - primary bile acid biosynthesis; Lipid Metabolism - C21-steroid hormone; EC 1.1.1.225; Lipid Metabolism - androgen and estrogen; EC 1.1.1.357 Chromosomal Location of Human Ortholog: 10p15.1 Cellular Component: cytoplasm; cytosol Molecular Function: 3(or 17)-alpha-hydroxysteroid dehydrogenase activity; aldo-keto reductase activity; bile acid transmembrane transporter activity; chlordecone reductase activity; electron carrier activity; oxidoreductase activity, acting on NADH or NADPH, quinone or similar compound as acceptor; retinal dehydrogenase activity Biological Process: androgen metabolic process; bile acid and bile salt transport; bile acid biosynthetic process; bile acid metabolic process; fat-soluble vitamin metabolic process; phototransduction, visible light; retinoid metabolic process; steroid metabolic process; vitamin metabolic process Disease: 46,xy Sex Reversal 8
Research Articles on AKR1C4	**1.** Studies indicate that mutations in aldo-keto reductase family 1 (AKR1) enzymes AKR1C1 and AKR1C4 are responsible for sexual development dysgenesis and mutations in AKR1D1 are causative in bile-acid deficiency.
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