# Recombinant Human AKR1C1, His-tagged

**Cat. No.** AKR1C1-27157TH **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant full length protein, corresponding to amino acids 1-323 of Human AKR1C1 with an N terminal His tag. Predicted mwt: 39 kDa; |
| **Species** | Human |
| **Source** | E.coli |
| **ProteinLength** | 1-323 a.a. |
| **Description** | 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 reaction of progesterone to the inactive form 20-alpha-hydroxy-progesterone. This gene shares high sequence identity with three other gene members and is clustered with those three genes at chromosome 10p15-p14. |
| **Conjugation** | HIS |
| **Tissue specificity** | Expressed in all tissues tested including liver, prostate, testis, adrenal gland, brain, uterus, mammary gland and keratinocytes. Highest levels found in liver, mammary gland and brain. |
| **Form** | Liquid |

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| **Purity** | >90% by SDS-PAGE |
| **Storage buffer** | Preservative: NoneConstituents: 20% Glycerol, 20mM Tris HCl, 1mM DTT, pH 8 |
| **Storage** | Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. |
| **Sequences of amino acids** | MGSSHHHHHH SSGLVPRGSH MDSKYQCVKL NDGHFMPVLG FGTYAPAEVP KSKALEATKL AIEAGFRHID SAHLYNNEEQ VGLAIRSKIA DGSVKREDIF YTSKLWCNSH RPELVRPALE RSLKNLQLDY VDLYLIHFPV SVKPGEEVIP KDENGKILFD TVDLCATWEA VEKCKDAGLAKSIGVSNFNR RQLEMILNKP GLKYKPVCNQ VECHPYFNQR KLLDFCKSKD IVLVAYSALG SHREEPWVDP NSPVLLEDPV LCALAKKHKR TPALIALRYQ LQRGVVVLAK SYNEQRIRQN VQVFEFQLTS EEMKAIDGLN RNVRYLTLDI FAGPPNYPFS DEY |
| **Sequence Similarities** | Belongs to the aldo/keto reductase family. |
| **Full Length** | Full L. |

## GENE INFORMATION

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| **Gene Name** | AKR1C1 aldo-keto reductase family 1, member C1 (dihydrodiol dehydrogenase 1; 20-alpha (3-alpha)-hydroxysteroid dehydrogenase) [ Homo sapiens ] |
| **Official Symbol** | AKR1C1 |
| **Synonyms** | AKR1C1; aldo-keto reductase family 1, member C1 (dihydrodiol dehydrogenase 1; 20-alpha (3-alpha)-hydroxysteroid dehydrogenase); DDH1; aldo-keto reductase family 1 member C1; DD1; DDH; HAKRC; MBAB; |

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| **Gene ID** | 1645 |
| **mRNA Refseq** | NM_001353 |
| **Protein Refseq** | NP_001344 |
| **MIM** | 600449 |
| **Uniprot ID** | Q04828 |
| **Chromosome Location** | 10p15-p14 |
| **Pathway** | Metabolism of xenobiotics by cytochrome P450, organism-specific biosystem; Metabolism of xenobiotics by cytochrome P450, conserved biosystem; Steroid hormone biosynthesis, organism-specific biosystem; Steroid hormone biosynthesis, conserved biosystem; |
| **Function** | 17-alpha,20-alpha-dihydroxypregn-4-en-3-one dehydrogenase activity; aldo-keto reductase (NADP) activity; androsterone dehydrogenase (B-specific) activity; bile acid binding; carboxylic acid binding; |

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