

Recombinant Human Aldo-Keto Reductase Family 1, Member D1 (Delta 4-3-Ketosteroid-5-Beta-Reductase), His-tagged

Cat. No. AKR1D1-1674H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human AKR1D1 protein, fused to His-tag at N-terminus, was expressed in <i>E. coli</i> and purified by using conventional chromatography techniques.
Species	Human
Source	Human
Description	Aldo-keto reductase family 1, member D1, also known as AKR1D1, is a member of the AKR superfamily. The AKR family of proteins are soluble NADPH oxidoreductases. They play important roles in the metabolism of drugs, carcinogens and reactive aldehydes. AKR1D1 is responsible for the catalysis of the 5-beta-reduction of bile acid intermediates and steroid hormones which carry a delta (4)-3-one structure. AKR1D1 is highly expressed in liver, colon and testis. Deficiency of this enzyme may contribute to hepatic dysfunction.
Concentration	0.5 mg/ml
Form	Supplied as a liquid in 20mM Tris-HCl buffer, pH 8.0, containing 1mM DTT, 20% glycerol and 100mM NaCl.
Purity	> 95% by SDS - PAGE
Sequence	1-326 amino acids: MGSSHHHHHH SSGLVPRGSH MDLSAASHRI PLSDGNSIPI IGLGTYSEPK STPKGACATS VKVAIDTGYR HIDGAYIQN EHEVGEAIRE

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KIAEGKVRRE DIFYCGKLWA TNHVP EMVRP TLERTLRVLQ LDYVDLYIIE
 VPMAFKPGDE IYPRDENGKW LYHKS NL CAT WEAMEACKDA GLVKSLGVS N
 FNRRQLELIL NKPGLKHKPV SNQV

Molecular Mass 39.5 kDa (346aa) confirmed by MALDI-TOF.

Applications SDS-PAGE

Storage Store at 4 deg C for short term storage (1/2 weeks). Aliquot and store at -20 deg C or -70 deg C for long term storage. Avoid repeated freeze/thaw cycles.

Pathway Bile acid and bile salt metabolism; Bile acid biosynthesis, cholesterol => chenodeoxycholate; Bile acid biosynthesis, cholesterol => cholate; Metabolic pathways; Metabolism of lipids and lipoproteins; Primary bile acid biosynthesis; Steroid hormone biosynthesis; Synthesis of bile acids and bile salts; Synthesis of bile acids and bile salts via 24-hydroxycholesterol; Synthesis of bile acids and bile salts via 7alpha-hydroxycholesterol

GENE INFORMATION

Gene Name [AKR1D1](#) [aldo-keto reductase family 1, member D1 \(delta 4-3-ketosteroid-5-beta-reductase\)](#) [Homo sapiens]

Official Symbol AKR1D1

Synonyms AKR1D1; aldo-keto reductase family 1, member D1 (delta 4-3-ketosteroid-5-beta-reductase); CBAS2; SRD5B1; 3o5bred; 3-oxo-5-beta-steroid 4-dehydrogenase; OTTHUMP00000208643; OTTHUMP00000208644; OTTHUMP00000208645; delta(4)-3-oxosteroid 5-beta-reductase; delta(4)-3-ketosteroid 5-beta-reductase; steroid-5-beta-reductase, beta polypeptide 1 (3-oxo-5 beta-steroid delta 4-dehydrogenase beta 1); EC1.3.1.3; aldo-keto reductase family 1 member D1

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Gene ID	6718
mRNA Refseq	NM_005989
Protein Refseq	NP_005980
MIM	604741
UniProt ID	P51857
Chromosome Location	7q32-q33
Function	3-oxo-5-beta-steroid 4-dehydrogenase activity; aldo-keto reductase (NADP) activity; delta4-3-oxosteroid 5beta-reductase activity; oxidoreductase activity; steroid binding

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