

Recombinant Human AKR1D1 protein

Cat. No. AKR1D1-28H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant AKR1D1 protein was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	AKR1D1 also known as 3-oxo-5beta-steroid 4-dehydrogenase isoform 1, 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.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.5) containing 1mM DTT, 0.1M NaCl, 10% glycerol
Molecular Mass	37.3 kDa (326aa)
AA Sequence	MDLSAASHRI PLSDGNSIPI IGLGTYSEPK STPKGACATS VKVAIDTGYR HIDGAYIYQN EHEVGEAIRE KIAEGKVRRE DIFYCGKLWA TNHVPPEMVRP TLERTLRVLQ LDYVDLYIIE VPMFAKPGDE IYPRDENGKW LYHKSNLKAT WEAMEACKDA GLVKSLGVSF FNRRQLELIL NKPGLKHKPV SNQVECHPYF TQPKLLKFCQ QHDIVITAYS PLGTSRNPW VNVSSPPLLK DALLNSLGKR

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YNKTAAQIVL RFNIQRGVVV IPKSFNLERI KENFQIFDFS LTEEEMKDIE
ALNKNVRFVE LLMWRDHPEY PFHDEY

Endotoxin < 1.0 EU per 1 microgram of protein (determined by LAL method)

Purity >95% by SDS - PAGE

Storage Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.

Concentration 1mg/ml (determined by Absorbance at 280nm)

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); SRD5B1; 3-oxo-5-beta-steroid 4-dehydrogenase; 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); CBAS2; 3o5bred;

Gene ID 6718

mRNA Refseq NM_001190906

Protein Refseq NP_001177835

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MIM	604741
UniProt ID	P51857
Chromosome Location	7q32-q33
Pathway	Bile acid and bile salt metabolism, organism-specific biosystem; Bile acid biosynthesis, cholesterol =>cholate, organism-specific biosystem; Bile acid biosynthesis, cholesterol => cholate, conserved biosystem; Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem;
Function	3-oxo-5-beta-steroid 4-dehydrogenase activity; delta4-3-oxosteroid 5beta-reductase activity; oxidoreductase activity; steroid binding;

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