

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-betareduction 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 VPMAFKPGDE IYPRDENGKW LYHKSNNLCAT WEAMEACKDA GLVKSLGVSF FNRRQLELIL NKPGLKHKPV SNQVECHPYF TQPKLLKFCQ QHDIVITAYS PLGTSRNPWF 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

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;