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## Product Data Sheet

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Product Name: AKR1D1 Human, His

Cat. No.: GP21380

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	3-oxo-5-beta-steroid 4-dehydrogenase; Aldo-keto reductase family 1 member D1; Delta(4)-3-ketosteroid 5-beta-reductase; Delta(4)-3-oxosteroid 5-beta-reductase; KR1D1; SRD5B1; CBAS2; 3o5bred.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MDLSAASHRI PLSDGNSIPI IGLGTYSEPK STPKGACATS VKVAIDTGYR HIDGAYIYQN EHEVGEAIRE KIAEGKVRRE DIFYCGKLWA TNHVP EMVRP TLERTLRVLQ LDYVDLYIIE VPM AFKPGDE IYPRDENGKW LYHKS NL CAT WEAMEACKDA GLVKSLG VSN FNRRQLELIL NKPGLKH KPV SNQVECHPYF TQPKLLKFCQ QH DIVITAYS PLGTSRNPIW VNVSSPPLLK DALLNSLGKR YNK TAAQIVL RFNIQRGVV V IPKSFNLERI KENFQIFDFS LTEEEMKDIE ALNKNVRFVE LLMWRDHPEY PFHDEY.		
Formulation	The AKR1D1 solution (0.5 mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 20% glycerol and 100mM NaCl.		

**Introduction**

Aldo-keto reductase family 1 member D1 (AKR1D1) belongs to the AKR superfamily. The AKR family proteins are soluble NADPH oxidoreductases, which have vital roles in the metabolism of drugs, carcinogens and reactive aldehydes. AKR1D1 is also responsible for the catalysis of the 5-beta-reduction of bile acid intermediates and steroid hormones that carry a delta (4)-3-1 structure. AKR1D1 is highly expressed in the liver, colon and testis. Deficiency of the AKR1D1 enzyme may contribute to hepatic dysfunction.

**Stability**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Background

AKR1D1 Human Recombinant fused with a20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 346 amino acids (1-326 a.a.) and having a molecular mass of 39.5kDa. The AKR1D1 is purified by proprietary chromatographic techniques.

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