

Recombinant Human EEF1D, His-tagged

Cat. No. EEF1D-3463H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human AKR1D1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
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.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 20% glycerol, 100mM NaCl
Molecular Weight	39.5 kDa (346aa) confirmed by MALDI-TOF
Purity	> 90% by SDS - PAGE
Concentration	0.5 mg/ml (determined by Bradford assay)
Sequences of amino	MGSSHHHHHH SSGLVPRGSH MDLSAASHRI PLSDGNSIPI IGLGTYSEPK

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acids

STPKGACATS VKVAIDTGYR HIDGAIYQN EHEVGEAIRE KIAEGKVRRE
 DIFYCGKLWA TNHVPMPVRP TLERTLRVLQ LDYVDLYIIE VPMFAKPGDE
 IYPRDENGKW LYHKSNLGAT WEAMEACKDA GLVKSLGVSF FNRRQLELIL
 NKPGLKHKPV SNQVECHPYF TQPKLLKFCQ QHDIVITAYS PLGTSRNPIW
 VNVSSPPLLK DALLNSLGKR YNKTAQIVL RFNIQRGVVV IPKSFNLERI
 KENFQIFDFS LTEEEMKDIE ALNKNVRFVE LLMWRDHPEY PFHDEY

Storage

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

GENE INFORMATION
Gene Name

[AKR1D1](http://www.ncbi.nlm.nih.gov/sites/entrez) **aldo-keto reductase family 1, member D1 (delta 4-3-ketosteroid-5-beta-reductase)** [*Homo sapiens*]<http://www.ncbi.nlm.nih.gov/sites/entrez>

Synonyms

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); EC 1.3.1.3; OTTHUMP00000208645; AKR1D1; CBAS2; SRD5B1; 3o5bred; 3-oxo-5-beta-steroid 4-dehydrogenase

Gene ID

[6718](http://www.ncbi.nlm.nih.gov/sites/entrez)<http://www.ncbi.nlm.nih.gov/sites/entrez>

mRNA Refseq

[NM_001190906](http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?val=NM_002046)http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?val=NM_002046

Protein Refseq

[NP_001177835](http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?val=NP_002037)http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?val=NP_002037

MIM

[604741](http://www.ncbi.nlm.nih.gov/entrez/dispmim.cgi?id=138400)<http://www.ncbi.nlm.nih.gov/entrez/dispmim.cgi?id=138400>

UniProt ID


P51857

Chromosome

7q32-q33http://www.ncbi.nlm.nih.gov/mapview/map_search.cgi?direct=on&idtype=gene&id=9470

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Location

Pathway

Metabolic pathways; Steroid hormone biosynthesis; Primary bile acid biosynthesis; Metabolism of lipids and lipoproteins

Function

3-oxo-5-beta-steroid 4-dehydrogenase activity; aldo-keto reductase activity; delta4-3-oxosteroid 5beta-reductase activity; oxidoreductase activity; steroid binding

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