

## Active Recombinant Human AKR1B1 protein

Cat. No. AKR1B1-136H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human AKR1B1(1-316aa) was expressed in E. coli.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	1-316 a.a.
<b>Description</b>	Aldose reductase (AKR1B1) is a member of the aldo-keto reductase (AKR) superfamily and catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. This protein is implicated in the development of diabetic complications by catalyzing the reduction of glucose to sorbitol.
<b>Form</b>	Liquid. In 20 mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol
<b>Bio-activity</b>	Specific activity: approximately 0.2-0.9 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme catalyzing the oxidation of 1 micromole NADPH/min at 25 centigrade. Specific activity was expressed as units/mg protein.
<b>Molecular Mass</b>	35.8kDa (316aa), confirmed by MALDI-TOF.
<b>AA Sequence</b>	MASRLLLNNG AKMPILGLGT WKSPPGQVTE AVKVAIDVGY RHIDCAHVYQ NENEVGVAIQ EKLREQVVKR EELFIVSKLW CTYHEKGLVKGACQKTLSDL KLDYLDLYLI HWPTGFKPGK EFFPLDESGN VVPSDTNILD TWAAMEELVD

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EGLVKAIGIS NFNHLQVEMI LNKPGLKYKPAVNQIECHPY LTQEKLIQYC  
 QSKGIVVTAY SPLGSPDRPW AKPEDPSLLE DPRIKAIAAK HNKTTAQVLI  
 RFPMQRNLVV IPKSVTPERIAENFKVDFE LSSQDMTLL SYNRNWRVCA  
 LLSCTSHKDY PFHEEF

**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** 1 mg/ml (determined by Bradford assay)

## GENE INFORMATION

**Gene Name** [AKR1B1](#) [aldo-keto reductase family 1, member B1 \(aldose reductase\)](#) [ [Homo sapiens](#) ]

**Official Symbol** [AKR1B1](#)

**Synonyms** [AKR1B1](#); [aldo-keto reductase family 1, member B1 \(aldose reductase\)](#); [ALDR1](#); [aldose reductase](#); [AR](#); [aldehyde reductase 1](#); [low Km aldose reductase](#); [Lii5-2 CTCL tumor antigen](#); [aldo-keto reductase family 1 member B1](#); [ADR](#); [ALR2](#); [MGC1804](#);

**Gene ID** [231](#)

**mRNA Refseq** [NM\\_001628](#)

**Protein Refseq** [NP\\_001619](#)

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<b>MIM</b>	103880
<b>UniProt ID</b>	P15121
<b>Chromosome Location</b>	7q35
<b>Pathway</b>	Fructose and mannose metabolism, organism-specific biosystem; Fructose and mannose metabolism, conserved biosystem; Galactose metabolism, organism-specific biosystem; Galactose metabolism, conserved biosystem; Glycerolipid metabolism, organism-specific biosystem; Glycerolipid metabolism, conserved biosystem; Metabolic pathways, organism-specific biosystem;
<b>Function</b>	alditol:NADP+ 1-oxidoreductase activity; aldo-keto reductase (NADP) activity; electron carrier activity; glyceraldehyde oxidoreductase activity; oxidoreductase activity;

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