

Active Recombinant Human AKR1B1 protein

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

SPECIFICATION

Product Overview	Recombinant Human AKR1B1(1-316aa) was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	1-316 a.a.
Description	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.
Form	Liquid. In 20 mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol
Bio-activity	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.
Molecular Mass	35.8kDa (316aa), confirmed by MALDI-TOF.
AA Sequence	MASRLLLNG 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 HNKTQAQVLI
RFPMQRNLLV 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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MIM	103880
UniProt ID	P15121
Chromosome Location	7q35
Pathway	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;
Function	alditol:NADP+ 1-oxidoreductase activity; aldo-keto reductase (NADP) activity; electron carrier activity; glyceraldehyde oxidoreductase activity; oxidoreductase activity;

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