

## Datasheet for ABIN935005 **AKR1B1 Protein (AA 1-316)**



[Go to Product page](#)

### 1 Image

#### Overview

Quantity:	100 µg
Target:	AKR1B1
Protein Characteristics:	AA 1-316
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	SDS-PAGE (SDS)

#### Product Details

Sequence:	MASRLLLNG AKMPILGLGT WKSPPGQVTE AVKVAIDVGY RHIDCAHVYQ NENEVGVAIQ EKLREQVVKR EELFIVSKLW CTYHEKGLVK GACQKTLSDL KLDYLDLYLI HWPTGFKPGK EFFPLDESGN VVPSDTNILD TWAAMEELVD EGLVKAIGIS NFNHLQVEMI LNKPGLKYKP AVNQIECHPY LTQEKLQYC QSKGIVVTAY SPLGSPDRPW AKPEDPSLLE DPRIKAIKAAK HNKTTAQVLI RFPMQRNLVV IPKSVTPERI AENFKVDFDE LSSQDMTLL SYNRNWRVCA LLSCTSHKDY PFHEEF
Characteristics:	Purified recombinant Human Aldose reductase protein Expression System: E.coli Bioactivity: Specific activity: approximately 0.5-0.6 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme catalyzing the oxidation of 1 µM NADPH/min at 25 °C. Molecular weight on SDS-PAGE will appear higher.
Purity:	> 95 % pure

## Product Details

---

Endotoxin Level: < 1.0 EU per µg of protein (determined by LAL method)

## Target Details

---

Target: AKR1B1

Alternative Name: Aldose reductase ([AKR1B1 Products](#))

Background: 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. Recombinant Aldose reductase (AKR1B) protein was expressed in E. coli and purified by using conventional chromatography techniques.

Alternative Names: ALR2 protein, member B1 AKR1B 1 protein, ALDR1 protein, aldehyde reductase 1 protein, aldo-keto reductase family 1 protein, AKR1B1 protein, Aldo-keto reductase family1 member B1 protein, AR protein, aldr-1 protein, Lii5-2 CTCL tumor protein protein, ADR protein, Aldose reductase protein, member B1 aldr 1 protein, Aldo-keto reductase family1 protein, low Km aldose reductase., Aldehyde reductase protein

Molecular Weight: 35.8 kDa (316 AA)

Pathways: [Metabolism of Steroid Hormones and Vitamin D](#), [C21-Steroid Hormone Metabolic Process](#), [Monocarboxylic Acid Catabolic Process](#)

## Application Details

---

Application Notes: Aldose reductase protein has been used in SDS PAGE and may be suitable for use in other assays to be determined by the end user.

Assay Procedure:

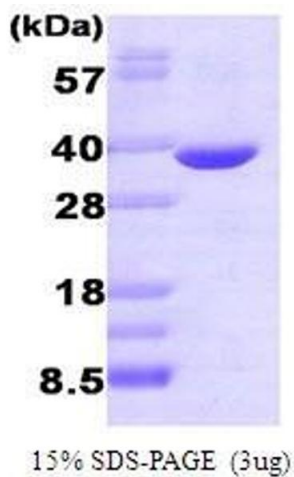
1. Prepare a 1 mL reaction mix into a suitable container : The final concentrations are 0.1 M sodium phosphate (pH 7.0), 11 mM DL-glyceraldehyde, 0.1 mM NADPH.
2. Add 50 µL of recombinant AKR1B1 solution with various concentrations (2.5 µg, 5 µg, 15 µg) in 750 µL reaction buffer.
3. Mix by inversion and Incubate at 25 °C for 2.5 minutes.
4. Add 200 µL of 50 mM DL-glyceraldehyde as a substrate and immediately mix by inversion.
5. Record the increase at A340 nm for 3 minutes.

Restrictions: For Research Use only

## Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	Supplied as a liquid in 20 mM Tris-HCl buffer, pH 8.0, containing 0 mM DTT, and 10 % glycerol.
Preservative:	Dithiothreitol (DTT)
Precaution of Use:	This product contains Dithiothreitol: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	RT/-20 °C
Storage Comment:	Store at 4 °C for short term storage (1/2 weeks). Aliquot and store at -20 °C or -70 °C for long term storage.

## Images



### SDS-PAGE

**Image 1.** Figure annotation denotes ug of protein loaded and % gel used.