

Aldose Reductase, human recombinant

CATALOG #:	7361-100	100 µg
ALTERNATE NAMES:	Aldo-keto reductase family1, member B1, AKR1B1, ADR, ALDR1, ALR2, AR	
SOURCE:	E. coli	
PURITY:	> 95% by SDS-PAGE	
FORM:	Liquid	
FORMULATION:	1 mg/ml in 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM DTT and 10% glycerol.	

ENDOTOXIN LEVEL: < 1.0 EU per 1 microgram of protein (determined by LAL method)

MOL. WEIGHT: 35.8 kDa (316 aa, 1-316 aa), confirmed by MALDI-TOF.

STORAGE CONDITIONS: 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.

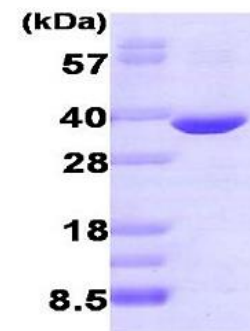
DESCRIPTION: Aldose reductase (AKR1B1) is a member of the aldo-keto reductase (AKR) superfamily and catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. This protein is implicated in the development of diabetic complications by catalyzing the reduction of glucose to sorbitol. Recombinant Aldose reductase (AKR1B) protein was expressed in E.coli and purified by using conventional chromatography techniques.

AMINO ACID SEQUENCE: MASRLLNNG AKMPILGLGT WKSPPGQVTE
AVKVAIDVGY RHIDCAHVYQ NENEVGVAIQ EKLREQVVKR EELFIVSKLW
CTYHEKGLVK GACQKTLSDL KLDYLDLYLI HWPTGFKPGK EFFPLDESGN
VVPSTNILD TWAAMEELVD EGLVKAIGIS NFNHLQVEMI LNKPGLKYKP
AVNQIECHPY LTQEKLQYC QSKGIVVTAY SPLGSPDRPW AKPEDPSLLE
DPRIKAIKAAK HNKTTAQVLI RFPMQRNLVV IPKSVTPERI AENFKVDFE LSSQDMTLL
SYNRNWRVCA LLSCTSHKDY PFHEEF

BIOLOGICAL ACTIVITY: Specific activity is >800 pmol/min/ug, and is defined as the amount of enzyme that catalyze the reduction of 1.0 pmole DL-glyceraldehyde in the presence of NADPH per minute at pH7.0 at 37C.

ACTIVITY ASSAY:

1. Prepare 180 µl assay buffer into a suitable container. The final concentrations are 220 mM Sodium phosphate (pH7.0), 8.8 mM DL- glyceraldehyde, 0.33 mM NADPH.
2. Equilibrate to 37C and monitor at A340nm until the value is constant using a spectrophotometer.
3. Add 20 µl of recombinant AKR1B1 protein 100 µg/ml in distilled water
4. Record in A340nm for 5 minutes.



15% SDS-PAGE (3ug)

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RELATED PRODUCTS:

- Human recombinant ALDH2 (Cat. No. 6332-100)
- Human recombinant ALDH3A1 (Cat. No. 6333-50)
- Human recombinant AKR7A3 (Cat. No. 6334-50)
- Human recombinant AKR7A2 (Cat. No. 6335-50)
- Human recombinant AKR1C1 (Cat. No. 6336-50)
- Human recombinant AKR1C3 (Cat. No. 6337-50)
- Human recombinant AKR1B10 (Cat. No. 6339-50)

FOR RESEARCH USE ONLY! Not to be used in humans.