Aldose Reductase Active Protein | AKR1B1 active protein

Recombinant Human Aldose Reductase

CATALOG #	HOST
AAA38715	**E Coli**

PRODUCT SYNONYMS

Aldose Reductase; Recombinant Human Aldose Reductase; AKR1B1 Human; Aldose Reductase Human Recombinant; Aldehyde Reductase; EC 1.1.1.21; ALR2; ALDR1; MGC1804; Aldo-keto reductase family1 member B1; AKR1B1; AR; ADR; AKR1B1 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95.0% as determined by SDS-PAGE.
Form/Format	The 1mg/ml protein solution contains 20mM Tris-HCl buffer pH 8, 10% glycerol, and 1mM DTT. Sterile filtered colorless solution.
Sequence	MASRLLLNNG AKMPILGLGT WKSPPGQVTE AVKVAIDVGY RHIDCAHVYQ NENEVGVAIQ EKLREQVVKR EELFIVSKLW CTYHEKGLVK GACQKTLSDL KLDYLDLYLI HWPTGFKPGK EFFPLDESGN VVPSDTNILD TWAAMEELVD EGLVKAIGIS NFNHLQVEMI LNKPGLKYKP AVNQIECHPY LTQEKLIQYC QSKGIVVTAY SPLGSPDRPW AKPEDPSLLE DPRIKAIAAK HNKTTAQVLI RFPMQRNLVV IPKSVTPERI AENFKVFDFE LSSQDMTTLL SYNRNWRVCA LLSCTSHKDY PFHEEF
Sequence Length	316
Biological 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 per minute at 25 degree C. Specific activity was expressed as units/mg protein.
Preparation and Storage	Store at 4 degree C if entire vial will be used within 2-4 weeks. Store, frozen at -20 degree C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

ADDITIONAL INFORMATION

Related Product Information for AKR1B1 active protein	**Description:** AKR1B1 Human Recombinant amino produced in E Coli is a single, non-glycosylated polypeptide chain containing 316 amino acids having a molecular mass of 35.8 kDa.The AKR1B1 is purified by proprietary chromatographic techniques. **Introduction:** AKR1B1 is part of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. AKR1B1 catalyzes the reduction several aldehydes, including the aldehyde form of glucose, and thus involved in the development of diabetic complications by catalyzing the reduction of glucose to sorbitol. AKR1B1 catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. Transgenic mice over expressing human aldose reductase show that AKR1B1 is a key player in ischemic injury and impairment of functional and metabolic recovery after ischemia. Aldose Reductase is an obligatory mediator of TNF-alpha signaling leading to an increase in the expression of adhesion molecules and increased binding of monocytes to the endothelium. AKR1B1 is a critical regulator of TNF-alpha-induced apoptotic signaling in endothelial cells.
Product Categories/Family for AKR1B1 active protein	Enzymes; Reductase

NCBI AND UNIPROT INFORMATION

NCBI GI #	4502049

NCBI GeneID	231
NCBI Accession #	NP_001619.1
NCBI GenBank Nucleotide #	NM_001628.2
UniProt Accession #	P15121; Q5U031; Q6FGA4; Q6ICP2; Q9BS21; Q9UCI9; B2R8N3
Molecular Weight	35,853 Da
NCBI Official Full Name	aldose reductase
NCBI Official Synonym Full Names	aldo-keto reductase family 1, member B1 (aldose reductase)
NCBI Official Symbol	AKR1B1
NCBI Official Synonym Symbols	AR; ADR; ALR2; ALDR1
NCBI Protein Information	aldose reductase; Lii5-2 CTCL tumor antigen; aldehyde reductase 1; aldo-keto reductase family 1 member B1; low Km aldose reductase
UniProt Protein Name	Aldose reductase
UniProt Gene Name	**AKR1B1**
UniProt Synonym Gene Names	ALDR1; AR
UniProt Entry Name	ALDR_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: https://stage.aaabiotech.com/e-coli-akr1b1-active-protein/aldose-reductase/38715