

Bioactive

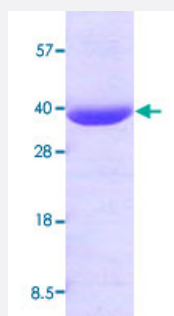
Full-Length

AKR1B1 (Human) Recombinant Protein

Catalog # P3474

Size 100 ug

Applications



Specification

Product Description

Human AKR1B1 (NP_001619, 1 a.a. - 316 a.a.) full-length recombinant protein expressed in *Escherichia coli*.

Sequence

MASRLLLNNGAKMPILGLGTWKSPPGQVTEAVKVAIDVGYRHIDCAHVYQNENEVGVAIQEKLRE
QVVKREELFMVSKLWCTYHEKGLVKGACQKTLSDLKLDYLDLYLIHWPTGFKPGKEFFPLDESGN
VVPSDTNILDTWAAMEELVDEGLVKAIGISNFNHLQVEMILNKPLKYKPAVNQIECHPYLTQEKLQ
YCQSKGMVVTAYSPLGSPDRPWAKPEDPSLLEDPRIKAAAKHNKTTAQVLIRFPMQRNLVVIPKSV
TPERIAENFKVDFELSSQDMTLLSYNRNWRVCALLSCTSHKDYPFHEEF

Host

Escherichia coli

Theoretical MW (kDa)

35.8

Form

Liquid

Preparation Method

Escherichia coli expression system

Purification

Conventional Chromatography

Concentration

1 mg/mL

Purity

> 95% by SDS-PAGE

Endotoxin Level

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

Activity	Specific activity: approximately 0.5-0.6 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme catalyzing the oxidation of 1 umole NADPH/min at 25°C. Specific activity was expressed as units/mg protein.
Quality Control Testing	Loading 3 ug protein in 15% SDS-PAGE
Storage Buffer	In 20 mM Tris-HCl buffer, pH 8.0 (1 mM DTT, 10% glycerol).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — AKR1B1

Entrez GeneID	231
Protein Accession#	NP_001619
Gene Name	AKR1B1
Gene Alias	ADR, ALDR1, ALR2, AR, MGC1804
Gene Description	aldo-keto reductase family 1, member B1 (aldose reductase)
Omim ID	103880
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. This member catalyzes the reduction of a number of aldehydes, including the aldehyde form of glucose, and is thereby implicated in the development of diabetic complications by catalyzing the reduction of glucose to sorbitol. Multiple pseudogenes have been identified for this gene. The nomenclature system used by the HUGO Gene Nomenclature Committee to define human aldo-keto reductase family members is known to differ from that used by the Mouse Genome Informatics database. [provided by RefSeq]
Other Designations	Lii5-2 CTCL tumor antigen aldehyde reductase 1 aldo-keto reductase family 1, member B1 aldose reductase low Km aldose reductase

Pathway

- [Fructose and mannose metabolism](#)
- [Galactose metabolism](#)
- [Glycerolipid metabolism](#)
- [Metabolic pathways](#)
- [Pentose and glucuronate interconversions](#)
- [Pyruvate metabolism](#)

Disease

- [Albuminuria](#)
- [Cardiovascular Diseases](#)
- [Coronary Disease](#)
- [Diabetes Complications](#)
- [Diabetes Mellitus](#)
- [Diabetic Angiopathies](#)
- [Diabetic Nephropathies](#)
- [Diabetic Neuropathies](#)
- [Diabetic Retinopathy](#)
- [Disease Progression](#)
- [Edema](#)
- [Genetic Predisposition to Disease](#)
- [Glomerulonephritis](#)
- [Hypospadias](#)
- [Kidney Failure](#)

- [Renal Insufficiency](#)