Recombinant Human AKR1A1

Cat. No. AKR1A1-485H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant humanAlcohol dehydrogenase was expressed in*E.coli*and purified by using conventional chromatography techniques. MW =36.5 kDa (325aa).
Species	Human
Source	E.coli
Description	Alcohol dehydrogenase [NADP+] (AKR1A1) is a member of the aldo/keto reductase superfamily and catalyzes the NADPH-dependent reduction of a variety of aromatic and aliphatic aldehydes to their corresponding alcohols. This protein is closely related (65% identity) to aldose reductase, an enzyme involved in the pathogenesis of some diabetic and galactosemic complications. It plays a role in the activation of procarcinogens, such as polycyclic aromatic hydrocarbon trans-dihydrodiols, and in the metabolism of various xenobiotics and drugs, including the anthracyclines doxorubicin (DOX) and daunorubicin (DAUN).
Amino Acid Sequence	MAASCVLLHT GQKMPLIGLG TWKSEPGQVK AAVKYALSVG YRHIDCAAIY GNEPEIGEAL KEDVGPGKAV PREELFVTSK LWNTKHHPED VEPALRKTLA DLQLEYLDLY LMHWPYAFER GDNPFPKNAD GTICYDSTHY KETWKALEAL VAKGLVQALG LSNFNSRQID DILSVASVRP AVLQVECHPY LAQNELIAHC QARGLEVTAY SPLGSSDRAW RDPDEPVLLE EPVVLALAEKYGRSPAQILL RWQVQRKVIC IPKSITPSRI LQNIKVFDFT FSPEEMKQLN ALNKNWRYIV PMLTVDGKRV PRDAGHPLYP FNDPY

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Form	Liquid. In 20mM Tris-HCl buffer (pH8.0) containing 50mM NaCl, 10% glycerol.
Purity	> 90% by SDS – PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Storage	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.

GENE INFORMATION

Gene Name	AKR1A1 aldo-keto reductase family 1, member A1 (aldehyde reductase) [Homo sapiens]
Synonyms	AKR1A1; aldo-keto reductase family 1, member A1 (aldehyde reductase); ALR; ARM; DD3; ALDR1; MGC1380; MGC12529; OTTHUMP00000009240; aldehyde reductase; alcohol dehydrogenase; dihydrodiol dehydrogenase 3; EC 1.1.1.2; Alcohol dehydrogenase [NADP+]; Aldo-keto reductase family 1 member A1; OTTHUMP00000009241; aldo-keto reductase family 1, member A1
Gene ID	10327
mRNA Refseq	NM_006066
Protein Refseq	NP_006057
MIM	103830
UniProt ID	P14550
Chromosome Location	1p33-p32

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Pathway	Glycerolipid metabolismC; Glycolysis / Gluconeogenesis; Metabolic pathways
Function	L-glucuronate reductase activity; alcohol dehydrogenase (NADP+) activity; aldehyde reductase activity; electron carrier activity; oxidoreductase activity; protein binding
PDB rendering based on 1ae4.	

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