Recombinant human Aldo-keto reductase 1A1/AKR1A1 protein

Catalog Number: ATGP0433

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-325aa

UniProt No.
P14550

NCBI Accession No.
NP_006057

Alternative Names
Dihydrodiol dehydrogenase 3, DD3, ARM, ALR, ALDR1, aldo-keto reductase family 1 member A1 (aldehyde reductase), Aldehyde reductase, Alcohol dehydrogenase [NADP+], Alcohol dehydrogenase, AKR1A1

PRODUCT SPECIFICATION

Molecular Weight
36.5 kDa (325aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 50mM NaCl, 10% glycerol

Purity
> 90% by SDS-PAGE

Tag
Non-Tagged

Application
SDS-PAGE

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

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,

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including the anthracyclines doxorubicin (DOX) and daunorubicin (DAuN). Recombinant human Alcohol dehydrogenase was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

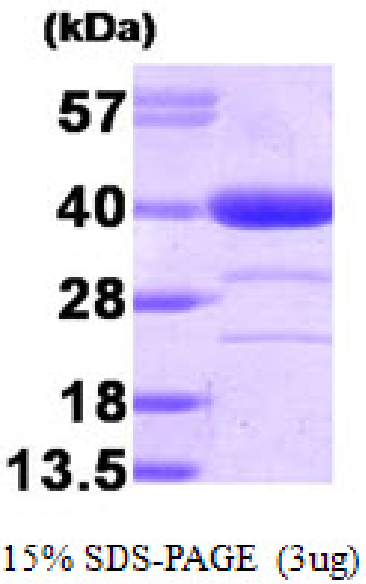
MAASCVLLHT GQKMPLIGLG TWKSEPGQVK AAVKYALSVG YRHIDCAAIY GNEPEIGEAL KEDVGPGKAV PREELFVTSK LWNTKHHPED VEPALRKTLA DLQLEYLDLY LMHWPYAFER GDNPFPKNAD GTICYDSTHY KETWKALEAL VAKGLVQALG LSNFNSRQID DILSVASVRP AVLQVECHPY LAQNELIAHC QARGLEVTAY SPLGSSDRAW RDPDEPVLLE EPVVLALAEKYGRSPAQILL RWQVQRKVIC IPKSITPSRI LQNIKVFDFT FSPEEMKQLN ALNKNWRYIV PMLTVDGKRV PRDAGHPLYP FNDPY

General References

Bohren KM., et al. (1989) J Biol Chem. 264(16): 9547-51.
Vander Jaqt DL., et al. (1990) J Biol Chem. 265(19):10912-8.

DATA

SDS-PAGE



15% SDS-PAGE (3ug)

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.