

Recombinant human Aldehyde Dehydrogenase 1-A1/ ALDH1A1 protein

Catalog Number: ATGP4096

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-501aa

UniProt No.

P00352

NCBI Accession No.

NP_000680.2

Alternative Names

Aldehyde dehydrogenase 1A1, ALDC, ALDH1, PUMB1, RALDH 1, 3-deoxyglucosone dehydrogenase 1, ALDH-E1, ALHDII, Aldehyde dehydrogenase family 1 member A1, Aldehyde dehydrogenase, cytosolic 1, Retinal dehydrogenase 1

PRODUCT SPECIFICATION

Molecular Weight

54.8 kDa (501aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 50mM Tris-HCl buffer (pH 7.5) containing 10% glycerol

Purity

> 90% by SDS-PAGE

Endotoxin level

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

Biological Activity

Specific activity is > 700pmol/min/ug, and is defined as the amount of enzyme that catalyze the oxidation of 1.0 pmole propioaldehyde by NAD per minute at pH 8.8 at 37°C.

Tag

Non-Tagged

Application

SDS-PAGE, Enzyme Activity

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.

Recombinant human Aldehyde Dehydrogenase 1-A1/ ALDH1A1 protein

Catalog Number: ATGP4096

BACKGROUND

Description

Aldehyde dehydrogenase 1A1 (ALDH1A1), also known as retinal dehydrogenase 1, is the second enzyme of the major oxidative pathway of alcohol metabolism. Two major liver isoforms of this enzyme, cytosolic and mitochondrial, can be distinguished by their electrophoretic mobilities, kinetic properties, and subcellular localizations. ALDH1A1 also belongs to the group of corneal crystallins that help maintain the transparency of the cornea. (Retinal + NAD⁺ + H₂O = retinoate + NADH) Recombinant ALDH1A1 protein was expressed in *E. coli* and purified by using conventional chromatography techniques.

Amino acid Sequence

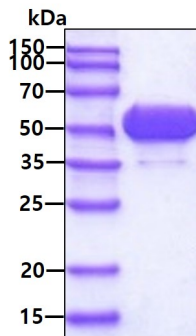
MSSSGTPDLP VLLTDLKIQY TKIFINNEWH DSVSGKKFPV FNPATEEELC QVEEGDKEDV DKAVKAARQA FQIGSPWRTM
DASERGRLLY KLADLIERDR LLLATMESMN GGKLYSNAYL NDLAGCIKTL RYCAGWADKI QGRTIPIDGN FFTYTRHEPI
GVCGQIIPWN FPLVMLIWKI GPALSCGNTV VVKPAEQTPL TALHVASLIK EAGFPPGVVN IVPGYGPTAG AAISSHMDID
KVAFTGSTEV GKLIKEAAGK SNLKRVTLLEL GGKSPCIVLA DADLDNAVEF AHHGVFVYHQG QCCIAASRIF VEESIYDEFV
RRSVERAKKY ILGNPLTPGV TQGPQIDKEQ YDKILDIES GKKEGAKLEC GGGPWGNKGY FVQPTVFSNV TDEMRIAKEE
IFGPVQQIMK FKSLDDVIKR ANNTFYGLSA GVFTKDIDKA ITISSALQAG TVWVNCYGVV SAQCPFGGFK MSGNGRELGE
YGFHEYTEVK TVTVKISQKN S

General References

Pereira F., et al. (1991) *Biochem Biophys Res Commun.* 175(3):831-8.

DATA

SDS-PAGE



3 μ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain