
Product Data Sheet

Product Name: ALDH2 Human

Cat. No.: GP21386

Batch No.: 1

Product Data

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|---------------------|---|--------------------|-------------------------|
| Purity | >98% | Source | Escherichia Coli. |
| Physical Appearance | solid | Shipping Condition | Shipped with Ice Packs. |
| Synonyms | ALDM; ALDHI; ALDH-E2; MGC1806; ALDH2; Aldehyde dehydrogenase mitochondrial; ALDH class 2. | | |
| Amino Acid Sequence | MSAAATQAVP APNQQPEVFC NQIFINNEWH DAVSRKTFPT VNPSTGEVIC QVAEGDKEDV DKAVKAARAA FQLGSPWRRM DASHRGRLNRLADLIERDR TYLAALETLD NGKPYVISYL VDLDMVLKCL RYYAGWADKY HGKTIPIDGD FFSYTRHEPV GVCGQIIPWN FLLMQAWKL GPALATGNVV VMKVAEQTPL TALYVANLIK EAGFPPGVVN IVPFGPTAG AAIASHEDVD KVAFTGSTEI GRVIQVAAGS SNLKRVTLEL GKGSPNIIMS DADMDWAVEQ AHFALFFNQG QCCCAGSRTF VQEDIYDEFV ERSVARAKSR VVGPNPFSKT EQGPQVDETQ FKKILGYINT GKQEGAKLLC GGGIAADRGY FIQPTVFGDV QDGMTIAKEE IFGPVMQILK FKTIEEVVGR ANNSTYGLAA AVFTKDLDKA NYLSQALQAGTVWVNCYDVF GAQSPFGGYK MSGSGRELGE YGLQAYTEVK TVTVPQKN S. | | |
| Formulation | ALDH2 protein (1mg/ml) contains 20mM Tris-HCl buffer, pH-7.5, 1mM DTT, 1mM EDTA and 10% Glycerol. | | |

Introduction

ALDH2 is part of the aldehyde dehydrogenase family of proteins which catalyze the chemical transformation from acetaldehyde to acetic acid. ALDH2 is the second enzyme of the major oxidative pathway of alcohol metabolism. ALDH2 has 2 major liver isoforms: cytosolic and mitochondrial, which differ by their electrophoretic mobilities, kinetic properties, and subcellular localizations. Nearly all Caucasians have 2 major isozymes, whereas roughly 50% of Orientals have only the cytosolic isozyme, omitting the mitochondrial isozyme. The extremely higher rate of acute alcohol intoxication with Orientals compared to Caucasians is due to the fact of the absence of mitochondrial

Caution: Product has not been fully validated for medical applications. For research use only.

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isozyme. ALDH2 has a low K_m for acetaldehydes, and is localized in mitochondrial matrix.

Biological Activity

Specific activity was found to be $> 250\text{pmol/min/ug}$, and was obtained by measuring the increase of NADH in absorbance at 340 nm resulting from the reduction of NAD at pH 8.0 at 25°C.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Background

ALDH2 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 501 amino acids (18-517 a.a.) & having a molecular mass of 54.5 kDa. The ALDH2 is purified by proprietary chromatographic techniques.

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