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# Product datasheet for TP300505M

## ALDH2 (NM_000690) Human Recombinant Protein

### Product data:

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| **Product Type:** | Recombinant Proteins |
| **Description:** | Recombinant protein of human aldehyde dehydrogenase 2 family (mitochondrial) (ALDH2), nuclear gene encoding mitochondrial protein, 100 µg |
| **Species:** | Human |
| **Expression Host:** | HEK293T |
| **Expression cDNA Clone or AA Sequence:** | >RC200505 protein sequence<br>Red=Cloning site Green=Tags(s)<br><br>MLRAAARFGPRLGRRLLSAAATQAVPAPNQQPEVFCNQIFINNEWHDAVSRKTFPTVNPSTGEVICQVAE<br>GDKEDVDKAVKAARAAFQLGSPWRRMDASHRGRLLNRLADLIERDRTYLAALETLDNGKPYVISYLVDLD<br>MVLKCLRYYAGWADKYHGKTIPIDGDFFSYTRHEPVGVCGQIIPWNFPLLMQAWKLGPALATGNVVVMKV<br>AEQTPLTALYVANLIKEAGFPPGVVNIVPGFGPTAGAAIASHEDVDKVAFTGSTEIGRVIQVAAGSSNLK<br>RVTLELGGKSPNIIMSDADMDWAVEQAHFALFFNQGQCCCAGSRTFVQEDIYDEFVERSVARAKSRVVGN<br>PFDSKTEQGPQVDETQFKKILGYINTGKQEGAKLLCGGGIAADRGYFIQPTVFGDVQDGMTIAKEEIFGP<br>VMQILKFKTIEEVVGRANNSTYGLAAAVFTKDLDKANYLSQALQAGTVWVNCYDVFGAQSPFGGYKMSGS<br>GRELGEYGLQAYTEVKTVTVKVPQKNS<br><br>TRTRPLEQKLISEEDLAANDILDYKDDDDKV |
| **Tag:** | C-Myc/DDK |
| **Predicted MW:** | 54.4 kDa |
| **Concentration:** | >0.05 µg/µL as determined by microplate BCA method |
| **Purity:** | > 80% as determined by SDS-PAGE and Coomassie blue staining |
| **Buffer:** | 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol |
| **Preparation:** | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps. |
| **Note:** | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process. |
| **Storage:** | Store at -80°C. |

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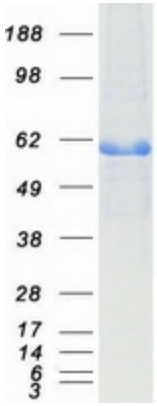
| **Stability:** | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |
| **RefSeq:** | NP_000681 |
| **Locus ID:** | 217 |
| **UniProt ID:** | P05091, A0A384NPN7 |
| **RefSeq Size:** | 2076 |
| **Cytogenetics:** | 12q24.12 |
| **RefSeq ORF:** | 1551 |
| **Synonyms:** | ALDH-E2; ALDHI; ALDM |
| **Summary:** | This protein belongs to the aldehyde dehydrogenase family of proteins. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. Two major liver isoforms of aldehyde dehydrogenase, cytosolic and mitochondrial, can be distinguished by their electrophoretic mobilities, kinetic properties, and subcellular localizations. Most Caucasians have two major isozymes, while approximately 50% of East Asians have the cytosolic isozyme but not the mitochondrial isozyme. A remarkably higher frequency of acute alcohol intoxication among East Asians than among Caucasians could be related to the absence of a catalytically active form of the mitochondrial isozyme. The increased exposure to acetaldehyde in individuals with the catalytically inactive form may also confer greater susceptibility to many types of cancer. This gene encodes a mitochondrial isoform, which has a low Km for acetaldehydes, and is localized in mitochondrial matrix. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Nov 2016] |
| **Protein Families:** | Druggable Genome |
| **Protein Pathways:** | Arginine and proline metabolism, Ascorbate and aldarate metabolism, beta-Alanine metabolism, Butanoate metabolism, Fatty acid metabolism, Glycerolipid metabolism, Glycolysis / Gluconeogenesis, Histidine metabolism, Limonene and pinene degradation, Lysine degradation, Metabolic pathways, Propanoate metabolism, Pyruvate metabolism, Tryptophan metabolism, Valine, leucine and isoleucine degradation |

## Product images:




Coomassie blue staining of purified ALDH2 protein (Cat# [TP300505]). The protein was produced from HEK293T cells transfected with ALDH2 cDNA clone (Cat# [RC200505]) using MegaTran 2.0 (Cat# [TT210002]).