

## Recombinant Human ALDH2 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. ALDH2-4336H    Lot. No. (See product label)

### SPECIFICATION

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| Product Overview | ALDH2 MS Standard C13 and N15-labeled recombinant protein (NP_000681) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Species          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Source           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Description      | <p>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.</p> |
| Molecular Mass   | 56.4 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AA Sequence</b>    | MLRAAARFGPRLGRRLLSAAATQAVPAPNQQPEVFCNQIFINNEWHDAVSRKTFPT<br>VNPSTGEVICQVAEGDKEDVDKAVKAARAAFQLGSPWRRMDASHRGRLLNRLADLI<br>ERDRTYLAALETLDNGKPYVISYLVLDLMVLKCLRYAGWADKYHGKTIPIDGFFS<br>YTRHEPVGVCGQIIPWNFLLMQAWKLGPALATGNVVMKVAEQTPLTALYVANLIK<br>EAGFPPGVNIVPGFGPTAGAAIASHEDVDKVAFTGSTEIGRVIQVAAGSSNLKRVTL<br>ELGGKSPNIIMSDADMDWAVEQAHFALFFNQGCCAGSRTFVQEDIYDEFVERSV<br>ARAKSRVVGPNPFDKTEQGPQVDETQFKKILGYINTGKQEGAKLLCGGGIAADRGY<br>FIQPTVFGDVQDGMTIAKEEIFGPVMQILKFKTIEEVVGRANNSTYGLAAAVFTKDLD<br>KANYLSQALQAGTVWVNCYDVFGAQSPFGGYKMSGSGRELGEYGLQAYTEVKTVT<br>VKVPQKNSTRTRPLEQKLISEEDLAANDILDYKDDDDKV |
| <b>Purity</b>         | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Stability</b>      | Stable for 3 months from receipt of products under proper storage and handling conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>        | Store at -80 centigrade. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Concentration</b>  | 50 µg/mL as determined by BCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Storage Buffer</b> | 100 mM glycine, 25 mM Tris-HCl, pH 7.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | ALDH2 aldehyde dehydrogenase 2 family member [ Homo sapiens (human) ]                                                                                                                                                                           |
| <b>Official Symbol</b> | ALDH2                                                                                                                                                                                                                                           |
| <b>Synonyms</b>        | ALDH2; aldehyde dehydrogenase 2 family (mitochondrial); aldehyde dehydrogenase, mitochondrial; ALDH class 2; liver mitochondrial ALDH; acetaldehyde dehydrogenase 2; nucleus-encoded mitochondrial aldehyde dehydrogenase 2; ALDM; ALDHI; ALDH- |

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E2; MGC1806;

**Gene ID** 217

**mRNA Refseq** NM\_000690

**Protein Refseq** NP\_000681

**MIM** 100650

**UniProt ID** P05091

**SDS-PAGE**



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