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# Recombinant Anti-HADH2 Rabbit mAb

Catalog # AP95065

## Product Information

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| **Application** | WB, IHC, FC, IF/IC |
| **Primary Accession** | Q99714 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Monoclonal |
| **Calculated MW** | 26923 |

## Additional Information

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| **Gene ID** | 3028 |
| **Other Names** | ERAB; HADH2; MRPP2; SCHAD; XH98G2; 3-hydroxyacyl-CoA dehydrogenase type-2; 17-beta-hydroxysteroid dehydrogenase 10; 17-beta-HSD 10; 3-hydroxy-2-methylbutyryl-CoA dehydrogenase; 3-hydroxyacyl-CoA dehydrogenase type II; Endoplasmic reticulum-associated amyloid beta-peptide-binding protein; Mitochondrial ribonuclease P protein 2; Mitochondrial RNase P protein 2; Short-chain type dehydrogenase/reductase XH98G2; Type II HADH |
| **Target/Specificity** | KLH-conjugated synthetic peptide encompassing a sequence within human HADH2 protein. The exact sequence is proprietary. |
| **Dilution** | WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A |
| **Format** | Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

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| **Name** | HSD17B10 |
| **Synonyms** | ERAB, HADH2, MRPP2, SCHAD, SDR5C1, XH98G |
| **Function** | Mitochondrial dehydrogenase involved in pathways of fatty acid, branched-chain amino acid and steroid metabolism (PubMed:10600649, PubMed:12917011, PubMed:18996107, PubMed:19706438, PubMed:20077426, PubMed:25925575, PubMed:26950678, PubMed:28888424, PubMed:9553139). Acts as (S)-3-hydroxyacyl-CoA dehydrogenase in mitochondrial fatty acid beta-oxidation, a major degradation pathway of fatty acids. Catalyzes the third step in the beta-oxidation cycle, namely the reversible conversion of (S)-3-hydroxyacyl-CoA to 3- ketoacyl-CoA. Preferentially accepts straight |

medium- and short-chain acyl-CoA substrates with highest efficiency for (3S)-hydroxybutanoyl- CoA (PubMed:10600649, PubMed:12917011, PubMed:25925575, PubMed:26950678, PubMed:9553139). Acts as 3-hydroxy-2-methylbutyryl-CoA dehydrogenase in branched-chain amino acid catabolic pathway. Catalyzes the oxidation of 3-hydroxy-2-methylbutanoyl-CoA into 2-methyl-3- oxobutanoyl-CoA, a step in isoleucine degradation pathway (PubMed:18996107, PubMed:19706438, PubMed:20077426). Has hydroxysteroid dehydrogenase activity toward steroid hormones and bile acids. Catalyzes the oxidation of 3alpha-, 17beta-, 20beta- and 21- hydroxysteroids and 7alpha- and 7beta-hydroxy bile acids (PubMed:10600649, PubMed:12917011). Oxidizes allopregnanolone/brexanolone at the 3alpha-hydroxyl group, which is known to be critical for the activation of gamma-aminobutyric acid receptors (GABAARs) chloride channel (PubMed:19706438, PubMed:28888424). Has phospholipase C-like activity toward cardiolipin and its oxidized species. Likely oxidizes the 2'-hydroxyl in the head group of cardiolipin to form a ketone intermediate that undergoes nucleophilic attack by water and fragments into diacylglycerol, dihydroxyacetone and orthophosphate. Has higher affinity for cardiolipin with oxidized fatty acids and may degrade these species during the oxidative stress response to protect cells from apoptosis (PubMed:26338420). By interacting with intracellular amyloid-beta, it may contribute to the neuronal dysfunction associated with Alzheimer disease (AD) (PubMed:9338779). Essential for structural and functional integrity of mitochondria (PubMed:20077426).

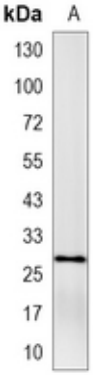
**Cellular Location**

Mitochondrion. Mitochondrion matrix, mitochondrion nucleoid

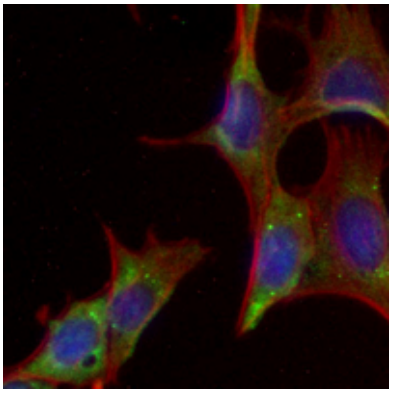
**Tissue Location**

Ubiquitously expressed in normal tissues but is overexpressed in neurons affected in AD.

## Images




Western blot analysis of HADH2 expression in HeLa (A) whole cell lysates. (Predicted band size: 27 kD; Observed band size: 27 kD)



Immunofluorescent analysis of HADH2 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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