

Recombinant Anti-HADH2 Rabbit mAb

Catalog # AP95065

Product Information

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

Additional Information

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

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](#)).

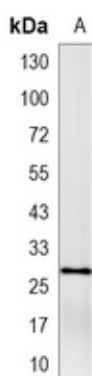
Cellular Location

Mitochondrion. Mitochondrion matrix, mitochondrion nucleoid

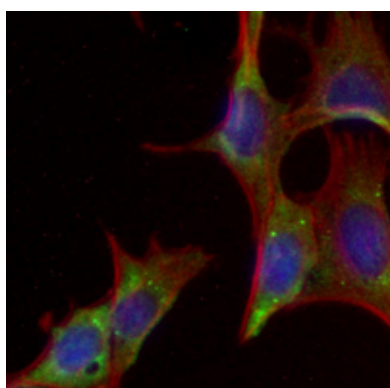
Tissue Location

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 humidified 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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